KNOWLEDGE OF CERVICAL CANCER AND AWARENESS OF SCREENING REGIMES/ROUTINES AMONG HIV POSITIVE WOMEN IN SWAZILAND

by

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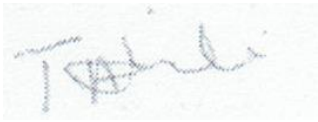
DECLARATION

I declare that **KNOWLEDGE OF CERVICAL CANCER AND AWARENESS OF SCREENING REGIMENS/ROUTINES AMONG HIV POSITIVE WOMEN IN SWAZILAND** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.



10 November 2016

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ABSTRACT

Background

Cervical cancer is one of the common cancers worldwide. Despite the available screening services, the uptake of cancer of the cervix is very low. The incidence and mortality in western countries has reduced greatly due to the introduction of cervical cancer screening programmes. However, this is not the same in Africa where cervical cancer is more prevalent in lower resource countries to lack of access to effective screening and services that enhances early detection and treatment.

Purpose/Aim of the study

The purpose of this research is to determine knowledge of cervical cancer and the level of awareness of screening regimes/routines among HIV positive women in Swaziland. The study was conducted at one hospital specifically at the HIV Care Unit and Public Health Unit between January and June 2015.

Methods

The questionnaire was administered to collect data and consisted both open and close-ended questions. The questionnaire comprises of three sections: Section A: Socio-demographic data and Section B: Awareness on Cervical Cancer. Section C: Awareness/knowledge on cervical cancer screening. The sample consisted of 123 HIV positive who are on antiretroviral therapy (ART) or ART naive. The mean age for the respondents was 35 years.

Results

From this study, N=28 (23%) out of 123 (77%) reported to have received annual Pap smear for cervical cancer screening. A low proportion of the respondents (45%) had

knowledge on cervical cancer screening. In addition, 63% of those who got information about cervical cancer screening through the radio perceived themselves to be at risk of getting cervical cancer. Only 4% heard about cervical cancer at the ART clinic, despite having been followed up for their care at the HIV clinic. Those who screened for cervical cancer were younger in age 25-34 years (80%). This study also revealed that education increased the changes of a woman to be screened for cervical cancer. If a woman had a university or high school education, she perceived herself to be at risk of getting cervical cancer.

Conclusion

Knowledge is power, cervical cancer campaigns should be conducted at national level in order to promote prevention through screening. Cervical cancer screening should be fully integrated into HIV services.

KEY Concepts

Awareness, cervix, cervical cancer, Human papilloma virus, risk factor.

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- Mrs EC Coetzer for professionally editing the manuscript

Dedication

I dedicate this study to my late grandmother Kate, whom without her love and encouragement; I would not have done this project.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
SDG	Sustainable Development Goal
PAP	Papanicolaus Smear Test
UNAID	United Nations AID for International Development
SHIMS	Swaziland HIV Incidence Measurement Survey
SPSS	Statistical Package for Social Sciences
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infection
WHO	World Health Organization

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Globally, cervical cancer is an avoidable cause of death among women in the sub-Saharan Africa with a total of 528 000 new cases every year It is the most common cancer affecting women worldwide (South African Litigation centre 2012:7). WHO (2014:4) reported that in the year 2012, 528 000 new cases of cervical cancer were diagnosed, and 266 000 women died of the disease, nearly 90% of them in low- to middle-income countries. About 70% of cervical cancer global burden occurs in areas will low levels of development and more than a fifth of the cases are from India (Sankaranarayanan, Kumar & Budukh 2011:954).

The World Health Organisation 2006 states that in sub-Saharan Africa, 34.8 new cases of cervical cancer are diagnosed per 100 000 women annually, and 22.5 per 100 000 die due to cervical cancer. In contrast, in North America, there is a lower incidence of 6.6 and 2.5 per 100 000. Therefore, the higher incidence in sub-Saharan Africa can be attributed to lack of access to effective screening and services that enhances early detection and treatment.

According to Globocan 2012: 12, an estimated 14.1 million new cases of cervical cancer and 8.2 million cancer-related deaths occurred in 2012, while 12.7 million and 7.6 million respectively occurred in 2008. According to estimates for 2012, the prevalence of cervical cancer was 32.6 million who were alive and diagnosed. All of the cases were above 18 years of age.

It is postulated by Parkin, Bray and Devesa (2011:6) that cervical cancer is an avoidable cause of death among women in the sub-Saharan Africa, the region is still having a total of 528 000 new cases every year. It is the most common cancer affecting women worldwide. Cervical cancer is most prevalent in lower resource countries.

The above statistics show that there is need to implement mechanisms for preventing cervical cancer, namely, HPV and national screening programmes and treatment (IARC 2012).

Moodley 2009:13 refers to cancer of the cervix as a serious burden on the reproductive health of women world-wide despite the fact that it is preventable. According to the WHO 2009; there were about 5000 000 new cases and more than 250 000 deaths among women that were recorded as a result of this preventable disease. It is emphasised that early screening is a proven cost-effective cervical cancer control strategy (Blair & Casas 2009:36).

The political and programmatic linking of sexual and reproductive health and Human Immunodeficiency Virus (HIV) responses has been gaining momentum. This linking has been implemented due to the fact that the majority of HIV infections are sexually transmitted. Sexual and reproductive ill-health and HIV share root causes like economic inequality, limited access to appropriate information, gender inequality, harmful cultural norms and social marginalization of the most vulnerable populations (UNAIDS 2010:4).

The trend of cervical cancer being most prevalent among women in low resource settings is not unique to Africa. It is also seen in other developing parts of the world (Haiti 93 per 100 000; Zimbabwe 52 per 100 000; Malawi 56 per 100 100; Swaziland 52 per 100 100). In contrast, very low rates are seen in developed countries. Cancer of the cervix develops in the tissues of the cervix. It is usually a slow-growing cancer that may not have symptoms but can be detected with regular Pap tests. In addition, cancer of the cervix is almost caused by Human Papilloma Virus (HPV) infection. Cervical cancer is malignant neoplasm of the cervix uteri or cervical area. It can manifest itself with vaginal bleeding and symptoms may not be present until at an advanced stage (WHO/ICO Information Centre on HPV and Cervical Cancer 2009). Treatment of cervical cancer consists of surgery (including *local excision*) in early stages, and then chemotherapy and radiotherapy in the advanced stages. Pap smear screening can identify potentially precancerous changes. The development of cancer can be prevented by the treatment of high grade changes.

In 1993, cervical cancer was classified as an AIDS defining illness by the Centres for Disease Control (CDC). AIDS is caused by HIV infection, which is another public health

concern. Sub-Saharan region is also greatly affected by the HIV epidemic and accounts for 69% of the 34 million people living with HIV in the world, with 26% of them being for the reproductive age group (15-49) years while women are the most affected population group who constitute 58%.

HIV situation in Swaziland

Due to the high prevalence in Swaziland, it is very critical to assess the awareness/knowledge of cervical cancer amongst HIV positive women (Swaziland HIIV Incidence Measurement Survey 2012:21). As indicated by (Shims 2012: 2), that the overall prevalence of HIV among men and women aged 18-49 is 31%. Prevalence is higher in women (38%) compared to men (23%). In both men and women, HIV rises steeply from the youngest age groups, and peaks before the age of 40. Lastly, the HIV prevalence peaked at 54% among women.

According to the Swaziland Integrated HIV Management Guidelines 2014:63, the country has incorporated in the national ART guidelines a section focusing on cervical cancer screening. The available screening tests include cytology which is the conventional Pap smear and VIA. This is the method that is widely used in the country. There are also management options for clients with pre-cancer lesions. Here biopsy is performed with the aid of coloscopy in order to support the HIV positive as several studies have revealed that HIV positive women are more vulnerable to getting cervical cancer than their HIV negative counterparts. On the other hand, patients need to be well informed about cervical cancer. This enables them to take informed decision on cancer prevention and management. Knowledge about cervical cancer screening promotes women to screen for it, thus preventing its occurrence. This study will give an insight on the knowledge and awareness of women about cervical cancer screening. The factors affecting women to screen or not to screen will be explored. This will help in the prevention of morbidity and mortality of women. The study will also assist in future programming for better sexual and reproductive health issues.

1.2 BACKGROUND TO THE RESEARCH PROBLEM

According to Ayinde, Omigbodun and Ilesanm (2004:69), epidemiological studies are coupled with recent advanced molecular biology coupled with recent advanced biology.

Findings have established a strong causal association between infection by certain serotypes (particularly 16 and 18) of sexually transmitted Human Papilloma Virus (HPV) and cervical cancer. An important factor is that the HPV link works by triggering alterations in the cells of the cervix which can lead to the development of the cervix intra-epithelial neoplasia, which will result in cancer.

In Swaziland, cervical cancer is the leading cancer among women aged 15–44 years where approximately 198 women are diagnosed with cervical cancer annually, of which 110 die of the disease (Human Papilloma Virus and Related Cancers, fact sheet 2013: January 3,2014). HIV is one of the risk factors for cervical cancer. Therefore, this calls for intervention in the country. In Swaziland, there is late detection of the disease Even if treatment is started, the likelihood of success is reduced and many cases remain undiagnosed. Balogun, Odukoya, Oyedivan and Ujomu (2012:76) argue that the most important risk factor in developing countries is infrequent cervical screening services and lack of effective cytological screening programmes. Although there is overwhelming evidence that cervical cancer today is almost totally preventable to a large extent through screening and treatment of pre-malignant lesions, the service is unfortunately not readily available to the general population. This is prevalent especially in developing countries such as Swaziland. Due to late detection of the disease, even if the treatment is started, the likelihood of success is reduced.

1.3 STATEMENT OF THE RESEARCH PROBLEM

Cervical cancer is one of the non-communicable diseases affecting women. It is the second most common cancer in women worldwide. Prevention of cervical cancer relies on the detection and treatment of squamous intraepithelial lesion, which is a premalignant stage.

There is also a low uptake of women screening for cancer of the cervix; and women in Swaziland also come late for the screening. Moreover, there is paucity of data in relation to high HIV infection and high rate of cancer of the cervix, and maybe due to the fact that Swaziland does not have a comprehensive service on management of cancer of the cervix. To the researcher’s knowledge there has not been a study conducted to assess the level of awareness / knowledge about cervical cancer screening among HIV positive women in Swaziland.

1.4 RESEARCH AIM/PURPOSE

The purpose of this research is to develop a suitable health education strategy to educate the community on the importance of early seeking of cervical screening for HIV positive women in Swaziland.

1.4.1 Research objectives

To meet the purpose of the study, the following objectives were formulated:

- To identify and characterize socio-economic factors associated with accessing cervical cancer screening services by women in Swaziland.
- To explore the factors affecting the uptake of cervical screening for cancer of women in Swaziland.
- To assess knowledge of cervical cancer and awareness of screening regimes/routines among HIV positive women in Swaziland.

1.5 RESEARCH QUESTIONS

This study seeks to answer the following research questions:

- What are the socio-economic demographic factors associated with accessing cervical cancer screening services by women in Swaziland?
- What are factors affecting the uptake of cervical screening for cancer of women in Swaziland?
- What is the level of awareness and knowledge about cervical cancer among women in Swaziland?

1.6 DEFINITIONS OF KEY CONCEPTS

For the purpose of this study the following terms are defined and further explained:

Awareness

Awareness is the state or ability to perceive, to feel, or to be conscious of events, objects, thoughts, emotions or sensory pattern (*Oxford Concise English Dictionary* 2003). Knowledge or understanding of a particular subject or situation: environment or political (*Dictionary of Contemporary English* 2006:88).

A **risk factor** is any attribute, characteristic or exposure of an individual that increases the likelihood of developing a disease or injury, for example, Smoking is a risk factor for lung cancer (*Oxford Concise English Dictionary* 2003:88).

Cervix

This is the inferior bottom part of the uterus that is located in the vagina (Smeltzer & Bare 2012:1396).

Cervical cancer

Cancer of the cervix is most often asymptomatic. When discharge, irregular bleeding, or pain, or pain or bleeding after sexual intercourse occurs, the disease maybe advanced. Vaginal discharge gradually increases in amount and finally is dark and foul smelling because of necrosis and infection of the tumour (Smeltzer & Bare 2012:147).

Human Papilloma Virus

The human papilloma virus is a viral infection of the reproductive tract. Sexually active men and women will be infected at some point; reinfection also occurs many times. Skin-to-skin mode of transmission has also been identified (WHO 2012).

1.7 RESEARCH METHODOLOGY

1.7.1 Research design

Research methodology refers to a scientific method that includes steps, procedures and strategies for obtaining and analysing data. It also provides answers to questions, and guidelines of dealing with difficulties arising during the research process that incorporates all procedures that scientists have used, and currently using, and could use in the future to search for knowledge (Burns & Grove 2005:23). The research methodology adopted for the study is quantitative, cross sectional and descriptive. These methods were used to assess the awareness and knowledge among HIV positive women about screening of cancer of the cervix. The quantitative method refers to the investigation of phenomena that lend themselves to precise measurement and quantification, often involving a rigorous and controlled design (Polit & Beck 2008:763). A cross-sectional study examines data at one point in time, meaning that data are collected on one occasion only for different subjects (Babbie 2010:106; Brink 2006:105; LoBiondo-Wood & Haber 2010:202). In this study, data will be collected once for every different study respondent.

1.8 SETTING AND POPULATION OF THE STUDY

Study setting

The study was carried out at a regional government hospital, which is also a regional referral hospital in Swaziland. The hospital has a separate clinic for care and treatment of HIV positive patients.

Respondents were women enrolled in HIV care clinic in that regional hospital in Swaziland. The study population was HIV positive women above 18 years of age who are on anti-retroviral therapy (ART) or ART naïve who consented to participating in the study. The sample frame was obtained from the appointment register.

1.8.1 Population and sample selection

Respondents will be women enrolled into HIV care and treatment, who are on ART or ART naïve who consented to participate in the study. Respondents must be 18 years and above. Systematic random sampling was used whereby every third eligible woman at the ART clinic was selected for the study. Data collection was conducted from 08h00 to 16h00 everyday through the data collection period. This method of sampling ensured that all patients seen throughout the period of data collection will have an equal probability of being sampled.

Sample size

For a precision of ±10% and a 95% Confidence Interval, the sample size needed works out to the following:

$= 1.96^* \sqrt{(p^*q/n)}$

$0.1^2 = 1.96^2 * (p^*q/n)$

$n = (1.96/0.1)^2 * (p^*q)$

$= (2/0.1)^2 * (0.5^*0.5)$

≈ 100

Then for a response rate of 80% = 100/0.8 =125

1.9 DATA COLLECTION METHODS AND PROCEDURES

Data were collected over a period of 10 days through the use of interview administered questionnaire, and it contained both open and close-ended questions. The

questionnaire was in SiSwati and English. The principal investigator collected the data for accuracy. The questionnaire comprised three sections: Section A: socio-demographic data; Section B: cervical screening uptake and Section C: Awareness/knowledge on cervical cancer screening. The local language version was then being pretested for ease of usage and comprehension.

1.9.1 Reliability and validity

The questionnaire was developed using the specific local language. The questionnaire was then back translated from the local language to English. A pilot test was conducted to establish the instrument's reliability and validity, its format appropriateness, content validity, level of difficulty, and time of administration, as well as to verify data collection methods. Face and content validity of the questionnaire was tested with 10 patients who were not included in the main study. The test-retest method was used to establish reliability. The reliability co-efficiency of more than 0.70 was kept as it was and those below 0.70 were reworded.

1.9.2 Data management and analysis

The study was conducted between August 2014 and 2015 October. The data were collected at the selected hospital by the researcher using the questionnaire. The sample size for the study was 125. A database and entry screen were developed in Microsoft access 2013, of which the study dataset was mined and exported to Statistical Package for the Social Sciences (SPSS) version 22 for analysis. The objectives and questions of the study were used in developing a data analysis and tabulation plan to guide the analysis process. Descriptive analysis was accomplished by populating frequencies; tables and charts and cross tabulations for quantitative analysis. Post coding of quantitative data was conducted to analyse open-ended questions after which description of data in meaningful terms to obtain answers to research questions was conducted.

1.10 ETHICAL CONSIDERATIONS

The informed consent form information sheet was read by the researcher in a language they understood, and they signed or provided their thumb print if they indeed consent to

participating in the study. Respondents were encouraged to ask for clarity where needed. Respondents were encouraged to also ask questions, and each of these was addressed to them. Giving informed consent was entirely voluntary, and no coercion or duress was used. Furthermore, respondents were not compelled to remain in the study; they were free to withdraw at any time.

To obtain approval to conduct the research at the hospital, the researcher wrote a formal letter to the Swaziland ethical clearance committee (Ministry of Health) (see the letter of request attached) (Annexure 1).

Ethical clearance was also obtained from the Higher Degrees Committee of the Department of Health Studies, UNISA (Annexure 2).

Permission to conduct the study was also requested from the Region through the regional health administrator (Annexure 3). The hospital received this same letter from the regional office to allow me to conduct the study.

1.11 SIGNIFICANCE OF THE STUDY

The findings of this study will assist the Swaziland Ministry of Health to recommend interventions aimed at increasing the uptake of cervical cancer screening and early identification of those at risk of developing cervical cancer, thereby reducing mortality and morbidity. In addition, the findings of the study shall be used to develop a suitable health education strategy to educate the community on the importance of early seeking of cervical screening.

1.12 SCOPE AND LIMITATIONS

The study was done at one site in Swaziland and this will make it difficult to generalise the study findings beyond the study sample.

1.13 CONCLUSION

This chapter discussed the global picture of cervical cancer screening. It also provided an overview of the problem statement, the purpose and the objectives of the study, research questions as well as the significance of the study. A summary of the research methodology has also been described accordingly. A thorough review of the relevant literature review is presented in Chapter 2.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter the literature as relevant to the topic of the study is discussed in detail. Firstly, the burden of cervical cancer worldwide will be discussed, then followed by review of research from the African continent and Swaziland in particular.

According to Polit and Beck (2012:94), literature review is an essential summary of existing research on a topic of interest. It puts a study problem in context and it provides a basis for the implementation of a research project. Literature review also presents a foundation on which to base new knowledge. Burns and Grove (2005:95) state that the key purpose for reviewing relevant literature is to gain a broad background insight or understanding of the available information concerning a specific research problem. This foundation enables a researcher to build upon the findings of others, since major breakthroughs or discoveries of new information in a field are invariably based on previous work.

From any given context, a description of a current knowledge can create an opportunity to debate and secure generally accepted facts and statements if they do give a true picture. Moreover, through detailed discussions given from literature studies, the researcher can identify gaps in what is known and indicates any statements with gap in knowledge as data could not be found during that period of researching. Against this background, this knowledge gap will persuade the current researcher to search for data.

2.2 CERVICAL CANCER

Cancer of the cervix is predominantly squamous cell cancer and also includes Adeno-carcinomas. It is less common than it was because of early detection by the Pap test. Risk factors vary from multiple sex partners to smoking to cervical infection (exposure to human papilloma virus (HPV) (Smeltzer & Bare 2012:147).

Clinical manifestations

In the early stages, cervical cancer does not have any symptoms. A very thin watery discharge maybe there but it maybe unnoticed. Usually, it occurs after sexual intercourse. A discharge, pain or bleeding after intercourse indicate that the disease is at an advanced stage. With this information, health care workers have a crucial role to educate clients on the causes, prevention and treatment of cervical cancer.

At an advanced stage, the tissue outside the cervix maybe invaded. It has been observed that most of the time, the fundus is involved. Excruciating pain may occur as a result of affected nerves (Smeltzer & Bare 2010:1667).

Clinical manifestation symptomatic

Cervical cancer is most often asymptomatic. When there is irregular bleeding, pain or bleeding after sexual intercourse, the disease is at an advanced stage. With the advanced stage, leg pain, dysuria and rectal bleeding may occur. Emaciation and anaemia often with fever may follow due to secondary infection (Smeltzer & Bare 2010:147).

Stages of cervical cancer

Cervical cancer is clinically staged; a doctor conducts a physical examination with other tests. The international Federation of Gynaecology and Obstetrics (FIGO) is the staging system used. This staging system classifies cervical cancer stages from I to IV as follows:

- Stage I: Cancerous cells confined to the cervix only.
- Stage II: Cancerous cells are now in other parts beyond the cervix.
- Stage III: Signifies where the cancer is found either in the lower 3rd of the vagina, but not the pelvic wall.
- Stage IV: Indicates cancerous cells that have spread from the cervix to the bladder, rectum or other areas of the body.

The impact of cervical cancer

Worldwide, cervical cancer accounts for approximately 12.0% of all cancers in women. It is the second most common cancer in women worldwide, but the most common cancer among women in developing countries. It is estimated that over a million women worldwide currently have cervical cancer. Most of these women have not been diagnosed, nor do they have access to treatment that could cure them or prolong their lives. WHO (2014:4) reported that in the year 2012, 528 000 new cases of cervical cancer were diagnosed, and 266 000 women died of the disease, nearly 90% of them in low- to middle-income countries. Without urgent attention, deaths due to cervical cancer are projected to rise by almost 25% over the next 10 years (WHO 2014). At least 85.0% of cervical cancer deaths occur in developing countries with most occurring in the poorest regions which include, South Asia, sub-Saharan Africa (SSA) and parts of Latin America (WHO 2014). In SSA, cancer of the cervix is the leading cancer with an estimated 75 141 new cases in 2008, which is 14%of total world incident.

The countries with highest rates include Zimbabwe, Uganda and Kenya. The disparity is attributed to the lack of effective screening programmes in developing countries that have a high incidence of cervical cancer (Mutyaba, Mmiro & Weiderpass 2006:15). Thus, cervical cancer has a devastating impact on women's health around the world, particularly among women in the developing world. Invasive cervical cancer (ICC) is the most common cancer diagnosed in women in SSA, with 75 141 new cases reported per year, and also the leading cause of cancer death at 50 233 deaths annually. Rates of cervical cancer vary considerably indifferent sub-regions; Guinea, Zambia, Tanzania, Malawi, and Mozambique have some of the highest ICC incidence rates in the world at >50/100000 (Ferlay, Shin, Bray, Forman, Mathers & Parkin 2008:855). The writers note that the rate of cervical cancer in the United States of America (USA) between 1947 and 1949, prior to the introduction of the Pap smear in the 1960s, was 40/100 000 in white women and 73/100 000 in black women. These rates have considerably reduced. Within the SSA region, estimated age standardised incidence rates (ASIR) are the highest in Eastern and Western Africa with ASIR of 34.5 and 33.7 per 100 000 women, respectively, and age standardised mortality rate (ASMR) of 25.3 and 24.0 per 100 000 women, respectively. Not surprisingly, ICC is the most important cause for cancer death in women in Eastern, Western and Middle Africa and second most important cause after breast cancer in Southern Africa. The burden of ICC is highest in

Guinea, Zambia, Tanzania, Malawi and Mozambique with ASIRs greater than 50/100 000 women and 25 per 100 000 in Kenya (De Vuyst, Alemany, Lacey, Chibwesha, Sahasrabuddhe, Banura Denny & Parham 2013:3). Cervical cancer is not a disease of old age, the majority of its victims are women who are at the peak of their biological and economically productive stages of life. This means, when a woman dies of cervical cancer, a life is not simply lost. Rather, a husband loses a wife, the children lose a mother, and the family is destabilised psychologically, financially and socially. At the same time, economically there is loss of a productive pair of hands and also a loss to the country which pays a large part of the cost of treating cervical cancer.

2.2.1 Cervical cancer risk factors

Cancer has different risk factors. Not all women exposed to the risk factors definitely develop cancer, but it is worth noting that the risk factors increase the odds of women getting it. Different risk factors of cervical cancer will be discussed.

Aetiology of cervical cancer

Cervical carcinoma is a condition that develops at the border of the cervix and the uterus. The major risk factor for the development of pre-invasive or invasive cervical carcinoma is infection with the HPV, which is transmitted sexually (Kimani et al 2012:9). The HPV can be detected in 99.7% of cervical cancers and is extremely common. Over 50.0% of sexually active women acquire the virus by 50 years of age (Leslea, Donna, Donna & Rachel 2013:2046). Different types of HPV are identified as precursors to cervical cancer (Bain, Burton & Mcgavigan 2011:175). However, the two most common subtypes, HPV 16 and 18 are found in over 70.0% of all cervical cancers. The squamous epithelium cells found at this junction of the cervix and uterus divide rapidly and have the potential to undergo an abnormal transition to dysplastic cells, if exposed to carcinogens such as HPV 16 and 18 (Leslea et al 2013:2046). Cervical changes progress from mild to severe over a period of years before changing to cancer. This indicates that more than 90.0% of cervical changes can be detected early through regular screening and can be treated before progressing to malignancy (Denny, Kuhn, Hu &Tsai 2010:1566). Most HPV infections are transient. Only 3−10% of women whose infections are not cured becomes persistent HPV carriers, constituting a high risk group for progression to cancer of the cervix (Collymore 2008:3). He further (2008:3) adds that

women may contract HPV when they are young but only progress to cervical cancer once they become 35 years of age or older. Pre-cancerous stages of cervical dysplasia are frequently asymptomatic, emphasising the importance of screening for early detection. Risk factors for HPV include early age at first sexual intercourse, increased number of sexual partners, smoking, immune-suppression including the Human Immunodeficiency Virus (HIV), high parity, and low socio-economic status. Cervical Intraepithelial Neoplasia (CIN) is common in HIV infected women because both HIV and HPV are sexually transmitted and HIV infected women are more likely to have persistent HPV infections (Mutyaba et al 2006:13). According to Collymore (2008:2), global efforts to detect cervical cancer have focused on screening women for abnormal cervical tissues, treating the condition before it advances and providing appropriate follow-up care. In developed countries, there has been a 75.0% decrease in the incidence and mortality of cervical cancer over the past 50 years while in developing countries it remains the second most common cause of cancer-related morbidity and mortality. The discrepancy is largely due to the widespread institution of cervical cancer prevention and screening programmes in developed countries. Conversely, these programmes are essentially non-existent in most developing countries. A recent meta-analysis of process of care failures in prevention of cervical cancer in developing countries revealed that poor screening history was the primary factor: 54.0% of invasive cervical cancer patients had inadequate screening histories and 42.0% had never been screened (Leslea et al 2013:2047).

Available screening tests

There are various types of cervical cancer screening tests available worldwide, included HPV/DNA, visual inspection with acetic acid (VIA), Pap smear and cervicography (Lee-lin, Pett, Menon, Lee & Nail 2007:1204). Historically, visual inspection of the cervix with Lugol's iodine, without magnification, was the initial method of screening of the cervix in the 1930s. This was rapidly replaced by cervical cytology because of its low sensitivity and specificity of 79.0% and 85.0% of VIA. As such, screening efforts have relied largely on Papanicolaou (Pap) smears to detect abnormal cell changes at the cervical transition zone (Denny et al 2010:1560). A Pap smear test became the standard for early detection of cervical cancer lesions from the 1950s (Sudenga et al 2013:897). Its sensitivity and specificity for CIN 2−3 is 70% to 80%, and 95% respectively. For developing countries, widespread utilisation of the Pap smear test presents a number of

challenges. These challenges have led to the re-introduction of VIA, which utilises the naked eye as a screening tool, for low resource settings. Despite its limited specificity, it is economical, requires little equipment, and provides immediate results (Denny et al 2010:1561). Both the Pap smear and VIA screening are effective in detecting CIN grade 2−3, which are considered to be true precancerous lesions (Gichangi, Estambale, Bwayo, Rogo, Ojwang & Opiyo 2003:828). The use of the HPV test, on its own or in combination with VIA, has the potential to improve cervical cancer screening in low resource settings. Unfortunately, it is expensive, requires infrastructure for processing, and has a long period of waiting for results. It has a higher sensitivity than VIA (90.2% vs. 41.4%), but a lower specificity (84.2% vs. 94.5%) (Sankaranarayanan 2009:1394). However, HPV testing is superior to VIA or cervical cytology because it detects a large number of high-risk sub-types of HPV. On the other hand, cervical cytology tests are excellent screening tools for pre-invasive cancer.

This indicates that rapid results for HPV testing may be suitable for performing screening and treatment in low resource setting. Furthermore, the authors state that it is preferable to use a combination of two screening tests rather than either test alone to avoid missed diagnosis. In the Western world, a diagnosis of cervical cancer is often established by biopsy and pathology reports (Denny et al 2010:1561). Symptomatic women without a visible lesion and those who have only abnormal cervical cytology undergo colposcopy with directed biopsy. If necessary, this is followed by diagnostic conisation. A screening test, followed during the same visit by treatment of women with positive results, eliminates communication difficulties regarding results and issues of non-compliance with follow up clinic visits. Cryotherapy is the most cost effective and preferred treatment for a screen-positive VIA testing in developing countries.

2.2.1.1 Human papilloma virus (HPV)

HPV is mainly transmitted through sexual intercourse and this is the most important risk factor. HPV is not curable, but the lesions caused by its presence can be managed (American Cancer Society 2009: [1]). The HPV may cause a growth called papilloma which is most of the time referred to as warts. Warts are a common symptom of HPV, but the virus does not always produce symptoms among infected persons. An individual woman can have papilloma virus for many years and can transmit it to someone else without even knowing. HPV is common to women under the age of 30 years.

High risk types of HPV cause cervical cancer are types 16 and 18. They are both accountable for 70% of cervical cancer cases worldwide. There are vaccines that prevent these types of HPV and they can safely be administered with other vaccines like diphtheria, tetanus and pertussis (DPT) and hepatitis B.

2.2.1.2 Cervical cancer and HIV/AIDS

Swaziland is a small country located in Southern Africa. It is about 17,364 km^2 and is landlocked with Mozambique in the East. Its neighbouring country is South Africa (Swaziland DHS 2007:42).

Link between cervical cancer and HIV

Cervical cancer was recognised as an AIDS-defining illness and as a leading cause of mortality in HIV-positive women by the US Centers for Disease Control and Prevention (CDC) in 1993:116. Although research into how specifically HIV affects the incidence of invasive cervical cancer is currently inconclusive and ongoing, there is no doubt that the negative effect of cervical cancer is exacerbated in southern Africa due in part to the high prevalence of HIV among women.

Swaziland also has high HIV incidence rate of 2.9%, and the epidemic continues to grow unabatedly. Although the country is very small (1,167,834 people), the HIV population is estimated to be over 190 000. An estimated 1 in 3 women (the highest female prevalence in the world) are positive. Furthermore, the Swaziland HIV Incidence measurement survey results also indicate that HIV prevalence in men and women ages 18-49 years is 31%. HIV and HPV have been associated with cervical cancer. The fact that Swaziland has a high HIV prevalence shows that cervical cancer rate will be high in the population. Therefore, screening becomes very relevant due to the HIV situation especially in women of child bearing age.

A desktop research combined with field research study in Namibia and Zambia was conducted. It was supplemented with focused group discussions where respondents were women living with HIV. This study was done mainly to assess the availability and accessibility to cervical cancer services in the two countries. A total of 181 women from

both rural and urban areas were interviewed in 15 focused group discussions. The findings revealed that Namibia and Zambia have no policies in cervical cancer which contributed in low screening rates. Policies ensure that specific health services are implemented in a certain way. The absence of policies shows that there is no political will. However, Swaziland is a signatory to International and regional frameworks on sexual and reproductive health (SRH) committed to provide its citizens with comprehensive quality SRH services (Swaziland Cervical Guidelines 2013:1) Swaziland had its first guidelines on cervical cancer in 2013.

In Swaziland, the national development strategy, the poverty reduction strategy and the national health policy support the provision of comprehensive quality SRH which includes the screening of cervical cancer and treatment. The study also revealed that level of awareness in the rural areas was low due to the fact that health care workers were misinforming their patients on the causes of cervical cancer. Different countries use different methods for the diagnosis of cervical cancer. In Zambia, the visual inspection method was used whereas Namibia uses Pap smear screening which creates barriers to access, partly due to the fact that health care workers do not screen patients for cervical cancer (Munazvo 2012:8).

HIV-positive women are at increased risk for HPV infection and progression to cervical intraepithelial neoplasia grade 3 (CIN3) (De Vuyst, Lillo, Broutet & Smith 2008:32). Linkage studies between HIV/AIDS and cancer registries have shown a 2- to 22-fold increased invasive cervical carcinoma incidence in HIV-positive women compared with the general female population from the same area. However, this depends upon the life expectancy of HIV-positive women and the coverage and quality of cervical cancer screening in different countries (Srulich 2007:11).

Other studies confirm the association between cervical cancer and HIV while other studies were not able to determine the association. Keller (2015:2) conducted a five-year cohort study that looked at HIV positive and HIV negative women and concluded that cervical cancer incidence was the same regardless of HIV infection.

In view of the previous studies, this study will be conducted in a place where HIV positive women receive their care and treatment. This study will assess whether

patients with HIV are aware of cervical cancer or not. Other factors affecting cervical cancer will also be considered/analysed to determine the association.

2.2.1.3 Smoking

Another risk of cervical cancer is smoking. Women who smoke are twice as likely as non-smokers to develop cervical cancer. This is because of the carcinogens in tobacco damaging the DNA of the cervical cancer cells, thus causing cervical cancer (American Cancer Society 2009:2).

2.2.1.4 Other risk factors

Cervical cancer can also be genetic. Women who have a family history of cervical cancer are 2-3 times more likely to develop cervical cancer than women without a history of cervical cancer. The use of contraceptives also predisposes an individual to cervical cancer, particularly the prolonged use of contraceptives 5-9 years (American Cancer Society 2009:4). Therefore, knowing and understanding the risk factors for cervical cancer is very important for early prevention and treatment

2.3 CERVICAL CANCER PREVALENCE AND BURDEN

Cervical cancer is the main cause of mortality in 40-80 countries of sub-Saharan countries. Cervical cancer is the most prevalent cancer among women (Global Burden of Disease 2013). VIA has been found to be an alternative for screening because it can be done by different health care workers.

2.3.1 The prevalence and burden of cervical cancer in Swaziland

Swaziland has a population of 398 952 women who are aged 15 years and older who are at risk of developing cancer of the cervix. It is estimated that annually, there are 223 women diagnosed of cervical cancer, of which 118 die from it. HPV burden data is not available in the general population (ICO HPV and related cancers, fact sheet 2014).

In Swaziland, women of reproductive age are at high risk of cervical cancer due to the high prevalence of HIV and multiple sexual partners. The situation is further exacerbated by limited capacity for pathological diagnosis and effective treatment services (WHO Country Strategy 2008-2013:6).

In Swaziland, cervical cancer is the leading sexual and reproductive health cancer (The Swaziland Cancer Guidelines 2013:4). Screening is offered in three hospitals, and they all screen and treat. All the public health units offer cervical cancer screening and refer suspicious results to the hospitals. Although the progression to cervical cancer can be stopped through early detection and treatment of precancerous changes, it still remains a major burden on public health resources in Swaziland (Sudenga et al 2013:895). Service challenges for cervical cancer screening and treatment are similar to those for other health interventions. They include: competing health needs, lack of political will, limited access to services, under developed health care structures, lack of knowledge about screening and treatment, limited financial, equipment, and human resources, costs, long queues and waiting times, missed referrals and follow-up.

A descriptive study conducted in Swaziland by (Okondo 2009:14) revealed that very high rates of cytological abnormalities with 43.2% of smears screened were reported as abnormal. He also pointed out that the most cost effective combination of screening modalities such as visual inspection, HPV DNA testing and cytology should be investigated. He also concluded that cervical cancer reduction needs to be managed within the greater framework of the HIV/AIDS epidemic framework.

2.4 LITERATURE TO EVALUATE WOMEN'S KNOWLEDGE OF CERVICAL CANCER SCREENING REGIMENS/ROUTINES AMONG HIV POSITIVE WOMEN

A descriptive study was conducted in rural KwaZulu-Natal, South Africa. The aim of the study is to access women's awareness, attitudes and experiences regarding cervical smear testing and for cervical cancer screening. The study was also conducted to better understand the factors influencing access to and utilization of cervical cancer screening services by rural women. The author noted that out of 69 women, only N=13 (18.8%) reported ever screening for cervical cancer. More than half of women reported that lack of information resulted in them not to be screened for cervical cancer. It was observed that education influenced women positively to screen for cervical cancer. A total of 42 (60.8%) of the respondents considered themselves to be at risk of getting cervical cancer and N=64 (93%) showed willingness to screen in the future (Ndlovu 2011:28).

A study by Bingham (2009:12) showed lack of knowledge on relationship between HPV and cervical cancer among health care providers. The study conducted in four developing countries, namely; Peru, Uganda, Vietnam and India sought understanding of cancer, disease burden and aetiology of cervical cancer. The study population included health care workers, teachers, parents, students and civil society representatives and authorities. The knowledge and attitude of the health care workers directly affects the decision made by the people they interact with. This highlights the fact that knowledge alone cannot make women to screen for cervical cancer.

A study was conducted at Ilorin, Nigeria on knowledge, attitude and practice of cervical smear as a screening procedure for cervical cancer. The respondents included nurses (83.9%), doctors (6.3%), medical laboratory technologies (4.8%) and pharmacists (2.5%). The findings of the study showed that 69.8% of the respondents knew Pap smear as a screening procedure for cervical cancer. Of these only 3% had Pap smear at least once previously the health care workers were significantly aware of the preventable nature of the cancers of the cervix but few were willing to utilize the service (Aboyeji et.al 2004:137). This study highlights the fact that knowledge alone does not allow people to utilise health services. This applies even to health workers as it is the case in this study.

In a rural KwaZulu-Natal, a study was conducted to determine baseline data regarding knowledge about risk factors for cervical cancer. The study showed a low uptake of the Pap smear test and a low level of knowledge on the prevention of cervical cancer risk factors and generally the uptake of the cervical cancer screening as a service. The study reported that only 6% had knowledge on all the risk factors while 65% knew only one of the risk factors of cervical cancer. Less than half (49%) of these patients stated correctly that the Pap smear screening test is used for early detection of cervical cancer; only 18% had ever been screened for cervical cancer (Hogue, Hogue & Kader 2008:112).

From the cases investigated, only 36.6% of women had consulted a gynaecologist (47.5%) among cases and 25.6% among controls and 3.9% had benefited from at least 1 Pap smear screening. It was noted the average knowledge score was 3.5 on a 0-13 scale, significantly higher in cases than controls. In this study, the women living with HIV had a better knowledge about cervical cancer despite the fact that their education and economic status was low. Health care professionals were the source of information. The reason why the cases did not undergo Pap smear was the absence of symptoms and default of medical injunction (Sichanh 2014:4). In this study, the controls showed lack of information on the usefulness of screening. The study showed that it is very important to inform women of their high risk to develop cervical cancer in HIV treatment centres. It also showed that it is not enough just to give information. Women need to know that they need to perform screening test and treat precancerous lesions before they advance.

In 2013, a study was conducted on knowledge and attitude towards cervical cancer screening among female students and staff in tertiary institution in the Niger Delta. The study sought to assess the knowledge, level of perception and attitude of female staff and students of Niger Delta University in Nigeria towards cervical cancer screening. About 278 (72%) of the respondents were aware of cervical cancer, while 182 (50.6%) were aware of cervical cancer screening (Owoeye & Ibrahim 2013:51). The most screening method that was most common was the Pap smear 100 (41.2%). However, some respondents believed that the blood test is used for cervical cancer screening. In this study, there was an association between awareness and prevalence of cervical cancer screening among respondents. A greater proportion of the respondents had little

or completely no knowledge on cervical cancer screening. This implies that some women are not aware of cervical cancer.

Another study was conducted to assess knowledge and awareness of cervical cancer and screening among Malaysian women who never had a Pap smear. The respondents showed lack of knowledge on cervical cancer and the Pap smear test. Respondents did not understand abnormal cervical cancer smear Thus; they did not see the reason why it is necessary for them to be screened so that any abnormalities could be screened. When respondents were asked about the risk factors, they were not aware of any; they never heard even of the papilloma-virus (Wong et.al 2009:4). The study revealed that accurate health education about cancer of the cervix is very important.

A cross sectional descriptive study was conducted in five locations of Onisha. Respondents were taken from churches, business outlets, schools, banks and markets. The study was conducted to investigate the awareness of cervical cancer screening and uptake in Nigeria, South East among Onitsha women. About 450 questionnaires with closed-ended questions were used (Nwozor 2013:5). This study projects that if one is a professional or student, he/she is likely to be aware of cervical cancer. HIV affects anyone. The current study had respondents who are diverse in education and employment but they are expected to have some level of awareness in cervical cancer because they are prone to get it due to their decreased level of immunity.

2.5 SUMMARY

This chapter discussed the literature relevant to the global burden of cervical cancer, and revealed information on knowledge and awareness of cervical cancer. The literature review identified previous studies that have been done regarding this topic.

Chapter 3 will discuss the research methodology to be used in this study. This will take account of the research design, setting, sampling data collection methods, data analysis processes and ethical considerations

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

In Chapter 1, an overview of the study was described. The literature review in Chapter 2 concentrated on the background of knowledge of cervical cancer and awareness of screening regimes/routines among HIV positive women. The chapter also critically analysed the research methodologies used in the reviewed studies, the findings, as well as some interventions done to improve cervical cancer awareness.

In this chapter, the research methodological processes that were used in the current study are discussed. This includes the research design, study site, target population, sampling methods, data collection techniques, validity and reliability of the research instrument, pretesting of the research instrument, ethical considerations and data analysis procedures.

3.2 RESEARCH DESIGN

According to Polit and Beck (2008:203), the study design is the researcher's general plan for responding to the research questions. Such a design includes an outline of what the investigator will do from the writing of the hypotheses, or research questions, and their operational implications to the final analysis of data. This research is hospital-based quantitative, cross-sectional descriptive in nature.

3.2.1 Quantitative descriptive study designs

Polit and Beck (2008:249) point out that quantitative research is a formal, objective, systematic process in which numerical data are utilised to obtain information. The research technique was used to describe variables, examine relationships among variables, and determine cause effective interactions between variables. According to Burns and Grove (2005:23), quantitative research is considered to produce "a hard or

true" science that is based on rigour, objectivity and control. In addition, in quantitative descriptive research, investigators often employ different methods such as interviews, unstructured observations which are guided by checklist and questionnaires to identify and illustrate the trend being studied. Therefore, quantitative research utilises structured tools to generate numerical data and uses statistical methods to interpret, organise and present such collected data (Burns & Grove 2005:232).

This study also described the existing cervical cancer screening regimens. According to Polit and Beck (2008: 274), a descriptive study design provides a way of discovering new meaning, describing what exists, determining the frequency with which a phenomenon occurs, and categorising information. It offers an accurate representation or account of characteristics of a particular individual, situation, or group (Burns & Grove 2005:26; Polit & Beck 2008:274).

3.3 RESEARCH SETTING

The study site was selected by using a non-probability, purposive sampling technique. A research setting is the environment in which the study takes place. The setting can be natural or controlled (Burns & Grove 2005:346; Polit & Beck 2006:264; 2008:339). This study took place in a natural setting or real life environment and no manipulation or change of the environment had been made in the selected health facility which might have affected the findings of the study.

3.4 POPULATION AND SAMPLE SELECTION

According to Burns and Grove (2005:345) and Polit and Beck (2008: 339), sampling involves selecting a group of people, events, behaviours, or other elements with which to conduct a study. It is the process of selecting a number of study units or portion of the population from a defined study population to represent the total population and the findings from the sample may represent the characteristics of the rest of the group.

In this study sampling was done from the ART unit at the selected hospital from 26 May till 12th June, 2015. The sample population consisted of women enrolled into HIV care and treatment, which are on ART or ART naïve and consented to participate in the study and were 18 years and above. Polit and Beck (2006:511; 2008:352) mention that

the target population is the entire population in which the researcher is interested and to which she/he would like to generalize the study results (Burns & Grove 2005:341-342; Polit & Beck 2006:511; 2008:352). A sample of those who were on HIV care and treatment were reviewed from the appointment register and daily register for patients.

3.5 DATA COLLECTION

According to Burns and Grove (2005:4) and Polit and Beck (2006:498; 2008:414), data collection is the gathering of information to address a research problem. It is the precise, systematic gathering of information relevant to study purpose or the specific objectives or questions of the research.

3.5.1 Data collection instrument

A self-structured questionnaire was used to collect data. The questionnaires were in English language and then translated into SiSwati. The questionnaire had closed-ended and few open-ended questions. The questionnaire had three sections (demographics, screening uptake and knowledge/awareness on cervical cancer).

3.5.2 Ensuring collection of quality data

The researcher collected the data herself. The completed questionnaires were double checked by the researcher to ensure that all the data were collected. The data tool was free from any bias**.**

3.5.3 Pretesting the instruments

Polit and Beck (2006:296) define a pre-test as a small scale study to establish whether the instrument is useful in generating the required information. In this study, the data collection tool was pretested on 10 respondents who were comparable to sample respondents. Modifications were done on the questionnaire based on the outcomes of the pre-test results. The adjustment was implemented to ensure validity and reliability of the research instrument. The 10 questionnaires for the pre-test were excluded from this study.

3.6 VALIDITY AND RELIABILITY

Validity and reliability are the two most significant standards for evaluating quantitative instruments. Thus precision is expressed as validity and reliability.

Internal validity

Internal validity refers to the extent to which it is possible to make an inference that the independent variable is truly influencing the dependent variable and that the relationship between the two is not the fake effect of a confounding factor (Polit & Beck 2008:303). The three types of validity had to be considered in this study were face, content and construct validity**.**

Face validity

Face validity refers to the subjective judgement on whether the data collection tool shows that it is measuring what it is supposed to measure (Polit & Beck 2008:302). In this study, the researcher had a questionnaire that had logical links and were relevant to the study objectives and questions. The researcher translated the tool from English to the local language, SiSwati. To avoid the challenge that can be created due to technical words and misinterpretations, the tool was translated into SiSwati by a linguistic professional, and then translated back into English by an independent translator. This questionnaire was revised by the Swaziland Ethics Committee and the research supervisor.

Construct validity

Construct validity defines how well a test or experiment measures up to its claims. It is an inference of how well a certain tool measures a theoretical construct. It warrants that the abstract concepts are measured logically and the association between variables is identified with the tool based on theory and clear operational definitions (Burns & Grove 2005:217).

In this current study, the variables were operationalised to create common understanding between the researcher and readers. The questionnaire was constructed

based on the reviewed literature and the relevant variables to be measured to determine the degree to which it will collect the required information. Pre-testing the tool was also helpful.

Content validity

Polit and Beck (2006:328) indicate that content validity is a systematic assessment of the content of a tool to make certain that it effectively represents the entire content area. It is assessed on the basis of the extent to which items or questions represent the issue they are supposed to measure. In this study, the researcher verified content validity by asking research experts in tool development to evaluate it. The experts also validated the appropriateness, accuracy and representativeness of the instrument. Modification on the tool was done; literature review also added value to the design and validity of the tool. In this study, the researcher pre-tested the tool.

External validity

This is how accurate the study is in providing knowledge that can be applied outside the present sample and population (Polit & Beck 2008:301). In this study, the researcher had to ensure that the selected sample is representative of the population and that the findings can be more readily applied to a broader group. The researcher assumed that by statistically selecting the sample of 125 from HIV positive women attending this hospital, it will be a representative of other clinical settings. The study site was also carefully selected to be a representative of other hospitals.

Reliability refers to the consistency

Reliability refers to the consistency with which a measure can be relied on to give the same result if the aspect being measured has not changed. A research instrument can be unreliable if a slight ambiguity in the wording of questions is ambiguous. In this study, the researcher is the only person who collected the data and the information was constantly checked for completeness during data collection.

3.7 DATA ANALYSIS

A database and entry screen were developed in Microsoft access 2013, of which the study dataset was mined and exported to SPSS version 22 for analysis. The objectives and questions of the study were used in developing a data analysis and tabulation plan to guide the analysis process. Descriptive analysis was accomplished by populating frequencies, tables and charts and cross tabulations for quantitative analysis. In addition, post coding of quantitative data was conducted to analyse open ended questions. Thereafter, description of data in meaningful terms to obtain answers to research questions was conducted.

3.8 ETHICAL CONSIDERATIONS

In this study, the researcher observed the ethical principles**.**

3.8.1 Permission to conduct the study

Since the study was conducted in a regional hospital, permission to conduct the study was sought from the regional health administrator's office. Permission was also sought from the UNISA Ethical Committee and the Swaziland Ethics Committee. Annexure 3

3.8.2 Confidentiality

The questionnaire for data collection was anonymous; no name was written except unique identifiers. The questionnaire had numbers assigned and data were reported in aggregate form. In addition, the researcher did not mention the name of the site. The completed data collection tools were stored in a lockable cabinet and the researcher used a personal laptop that was locked at all times.

3.9 SUMMARY

The methodology was discussed in this chapter. Chapter 4 will be discussed next and it contains the study findings, and discussions surrounding it. The conclusions, limitations and recommendations will be discussed in Chapter 5.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION OF RESULTS

4.1 INTRODUCTION

In Chapter 3, the research methodological processes that were used in the current study were discussed. This was the research design, study site, target population, sampling methods, data collection techniques, validity and reliability of the research instrument, pretesting of the research instrument, ethical considerations and data analysis procedures. In addition, the ethical concepts of research were explained. In the current chapter, the findings from the data are presented and discussed along with statistical analysis.

4.2 STATEMENT OF THE RESEARCH PROBLEM

Cervical cancer is one of the non-communicable diseases affecting women. It is the second most common cancer among women worldwide. Prevention of cervical cancer relies on the detection and treatment of squamous intraepithelial lesion, which is a premalignant stage.

There is also a low uptake of women screening for cancer of the cervix; and women in Swaziland also come late for the screening. There is paucity of data in relation to high HIV infection and high rate of cancer of the cervix, and maybe due to the fact that Swaziland does not have a comprehensive service on management of cancer of the cervix. To the researcher's knowledge there has not been a study conducted to assess the level of awareness knowledge about cervical cancer screening among HIV positive women in Swaziland**.**

4.2.1 Research objectives

The specific objectives were as follows:

- To identify and characterize socio-economic demographic factors associated with accessing cervical cancer screening services by women in Swaziland.

- To explore the factors affecting the uptake of cervical screening for cancer of women in Swaziland.
- Assess knowledge of cervical cancer and awareness of screening regimes/routines among HIV positive women in Swaziland.

4.3 DATA ANALYSIS

Data were collected at the selected hospital by the researcher using a questionnaire. The sample size of the study was 125. Both database and entry screen were developed in Microsoft Access 2013, of which the study dataset was mined and exported to SPSS version 22 for analysis. The objectives and questions of the study were used in developing a data analysis and tabulation plan to guide the analysis process. Descriptive analysis was accomplished by populating frequencies, tables and charts and cross tabulations for quantitative analysis. Post coding of quantitative data was conducted to analyse open-ended questions. Thereafter, description of data in meaningful terms to obtain answers to research questions was conducted.

4.4 SECTION A: DEMOGRAPHIC CHARACTERISTICS

The sample consisted of 123 respondents instead of the 125 that was intended. Two respondents withdrew from the study. The 123 were HIV positive women who were either on ART or PREART as described in the Swaziland Cervical Cancer Guidelines of (2013:6). The sample consisted of women aged 18 and upwards because the age group is one of the cervical cancer risk factors (exposure to sexual activity <20 years of age). The demographic information includes age, race, marital status, educational level, residence, employment status, marital status and religion.

4.4.1 Age distribution

In this study, women aged from 18-49 years of age were enrolled. The mean age for the participants was 35 years and of the 123 women who participated in the study most of the women were in the age-group 26-33 and 34-41 which resulted 40 participants in each age-group

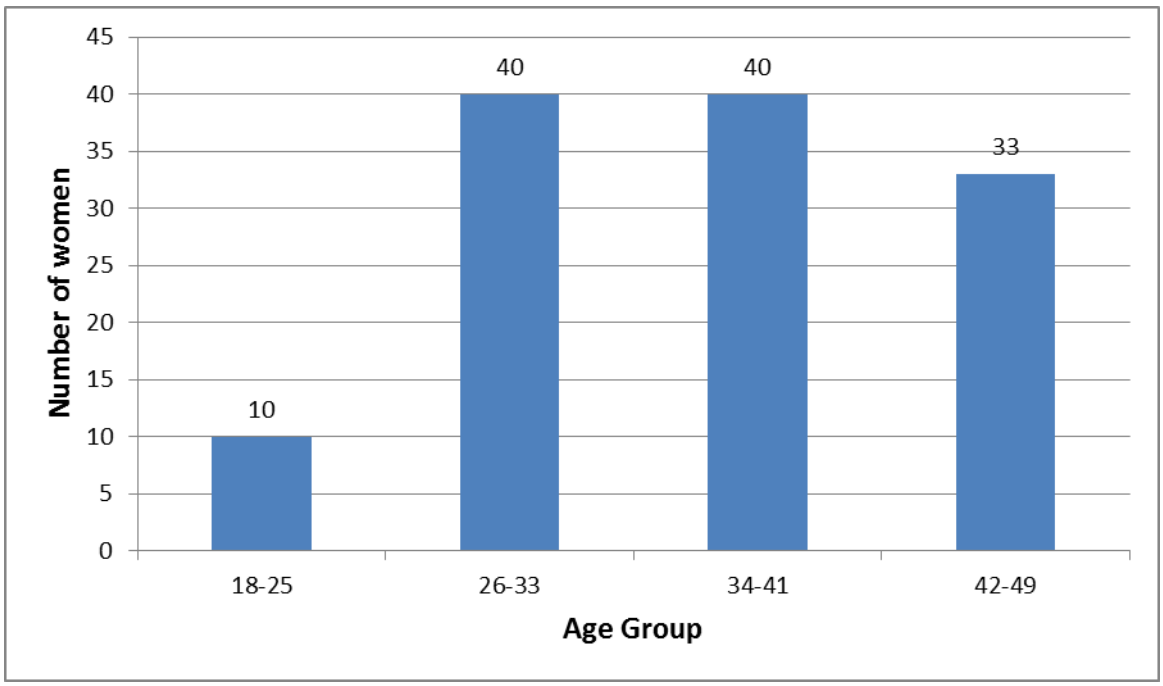

Figure 4.1: Number of women who participated in the study per age group (n=123)

4.4.2 Race

Regarding race, all the women that participated in the study were black due to the fact that the population in this area is black.

4.4.3 Marital status

The knowledge of marital status is crucial because studies have shown that it is an important determinant of health care utilisation. In this study, 45% of the women were married while 41% were single.

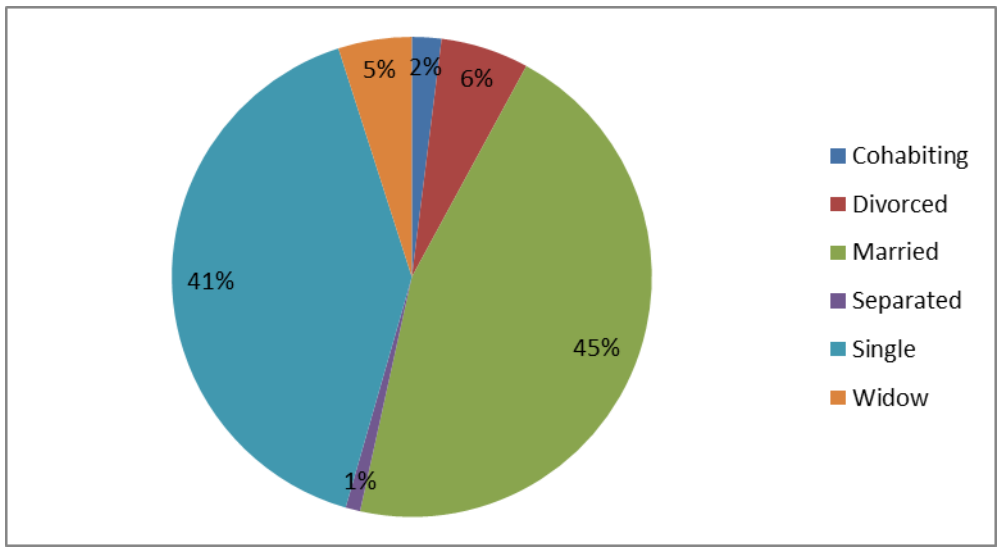

Figure 4.2: Respondents' marital status (n=113)

4.4.4 Level of education

Education is one of the most critical variables in epidemiological reviews of health service utilisation. There is a positive relationship between levels of education and health service use. The lack of formal schooling and illiteracy has been usually associated with high risk and low health seeking behaviour. The general level of education in a country becomes a marker. About 83.8 % of participants had some form of education while 45% had up to the level of secondary education.

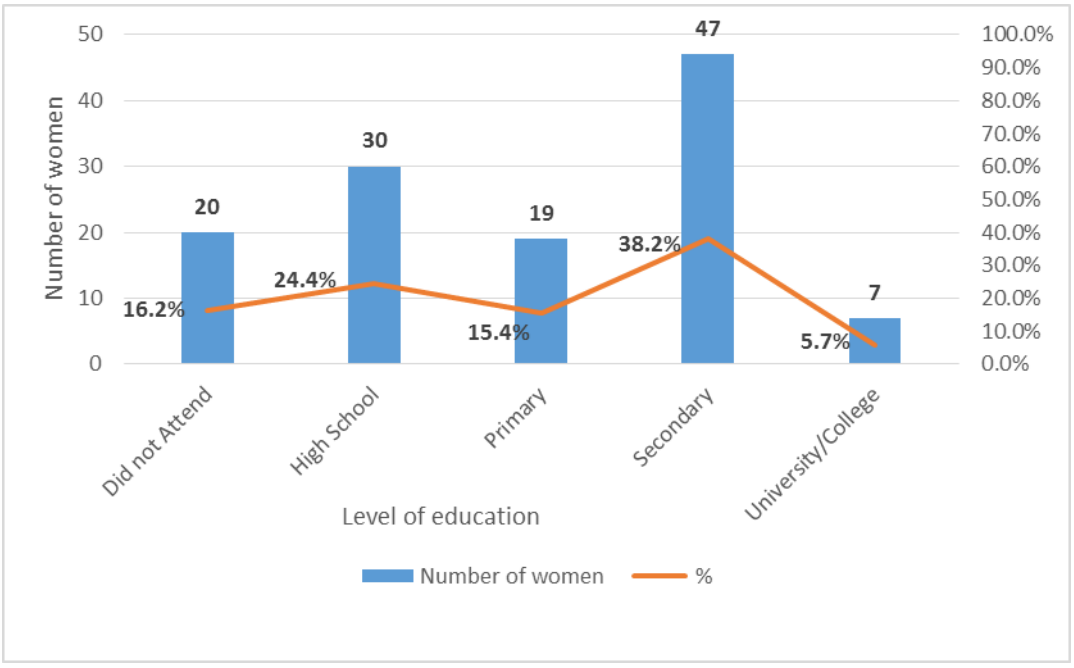

Figure 4.3: Respondents by level of education (n=123)

4.4.5 Area of residence

Regarding residence, participants resided in peri-urban, rural and urban areas. Majority of respondents came from the rural areas. Most of the participants (75.6%) resided in the rural areas.

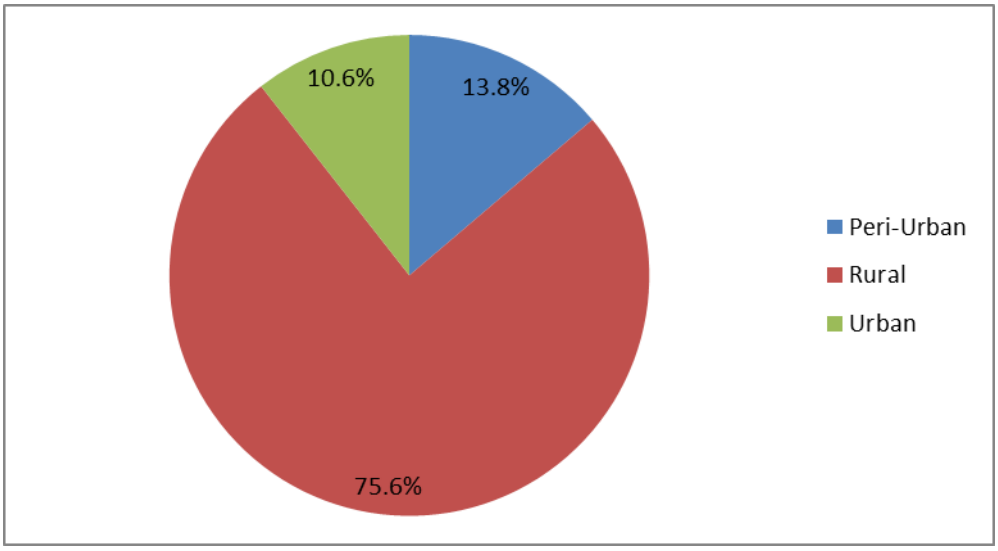

Figure 4.4: Respondents' area of residence (n=123)

4.4.6 Employment status

The proportion of respondents that reported to be unemployed was 60.0% while 23.0% were employed full time.

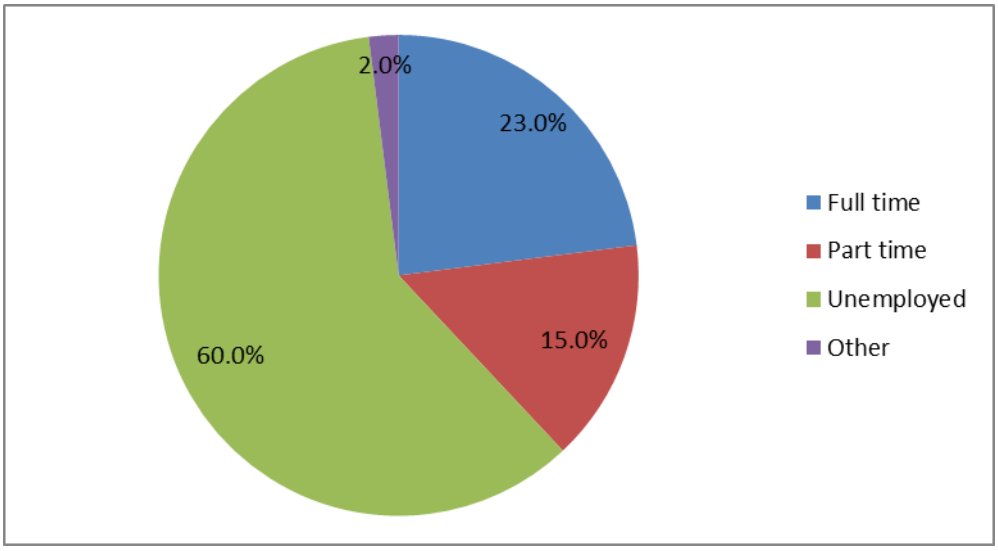

Figure 4.5: Employment status for the women (n=123)

4.4.7 Mean income per month

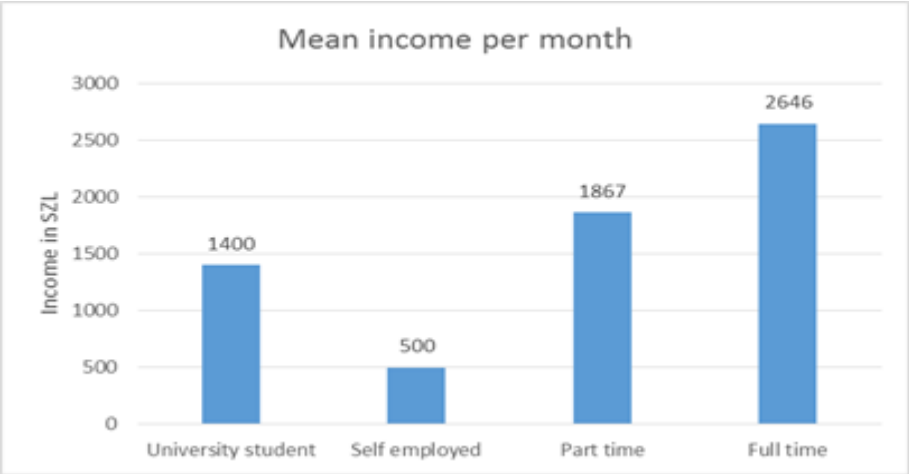

Figure 4.6: Mean income per month (n=123)

4.4.8 Religion.

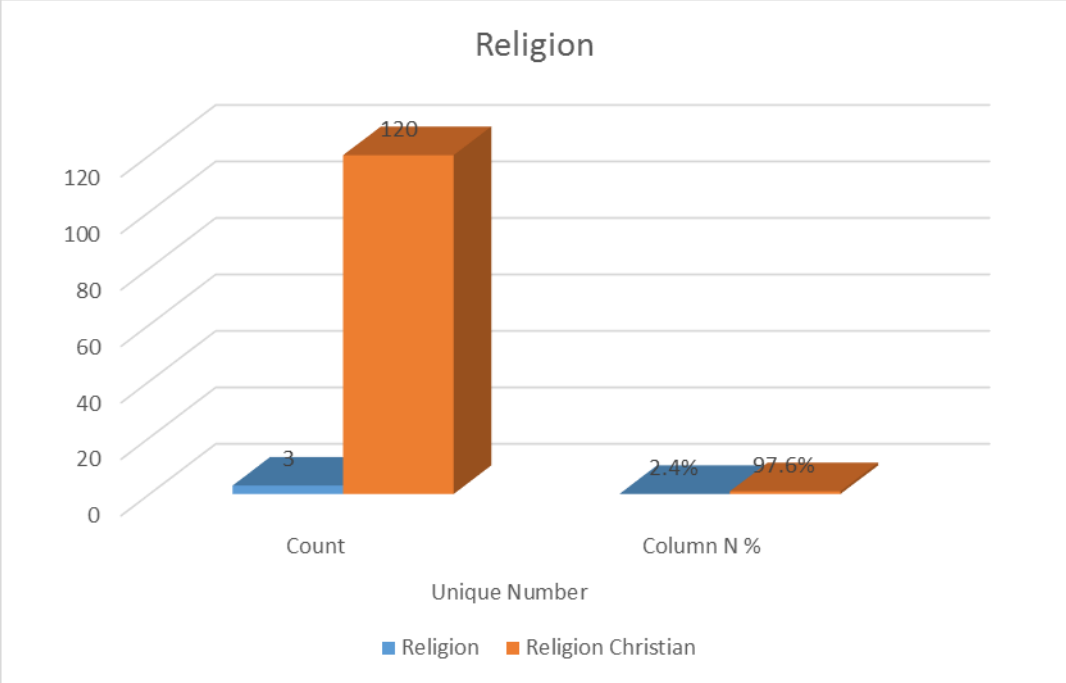

Figure 4.7 : Religion (n=123)

In addition, the researcher wanted to know the religious beliefs of the respondents, of which n=120(97%) were Christians and n=3 were non-Christians (2.4%).

4.4.8 Sexual debut

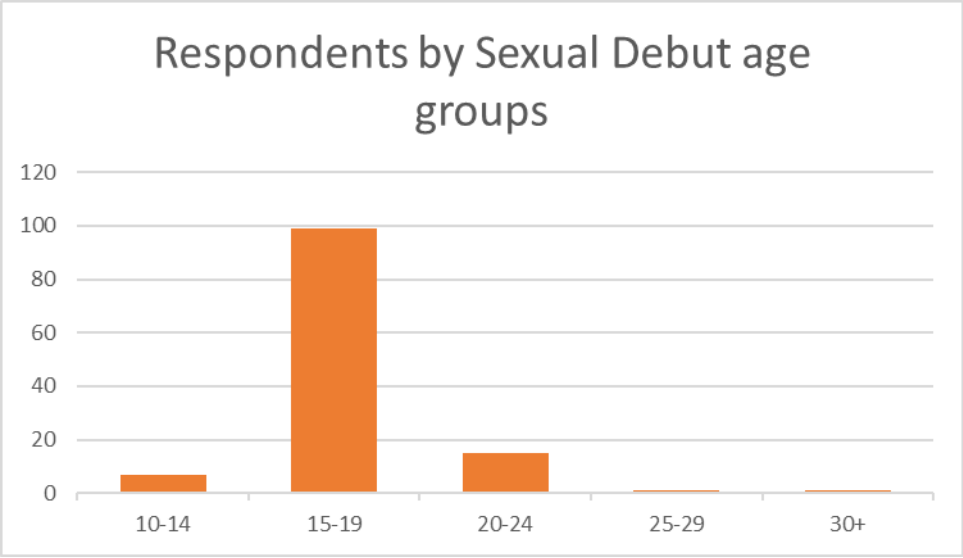

Figure 4.8 Sexual debut (n=123)

With regards to sexual debut, this figure is showing that the majority (81.3%) of the respondents had sexual debut between 15-19 years whilst 19.7% had it at 20-24 years. One of the risk factors for cervical cancer is early sexual debut because women are repeatedly infected with the human papilloma virus.

4.4.9 Women by number of sexual partners

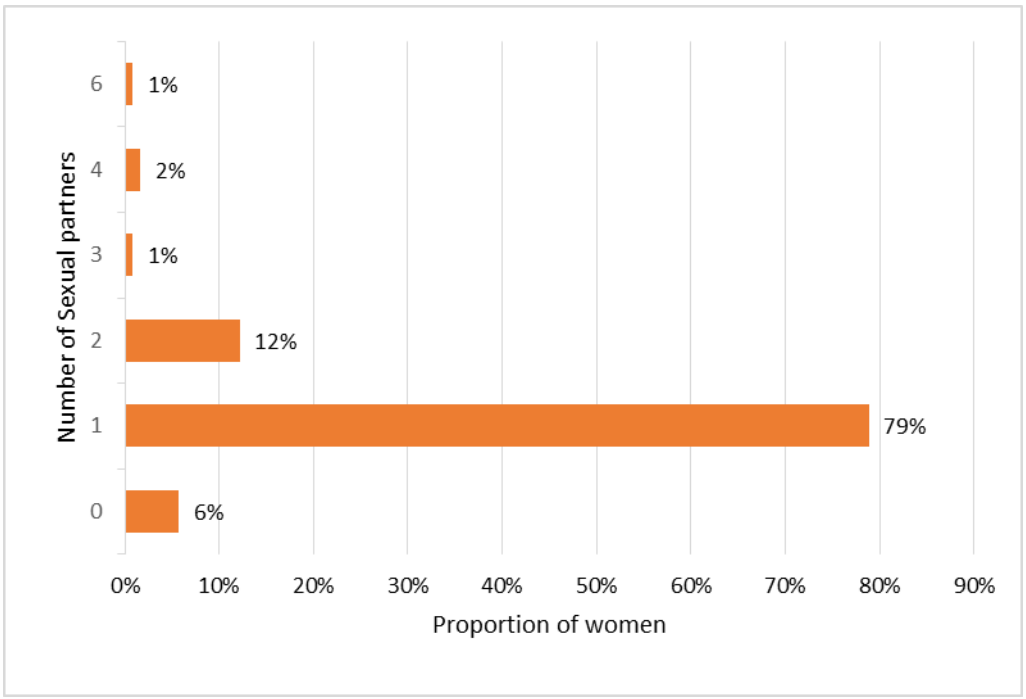

Figure 4.9: Proportion of women by number of sexual partners (n=123)

4.5 SECTION B: SCREENING UPTAKE

4.5.1 Annual cervical cancer screening and turnaround time for pap smear results

The current research assessed cervical cancer screening among HIV positive women. Only 23% of the participants actually screened for cervical cancer annually.

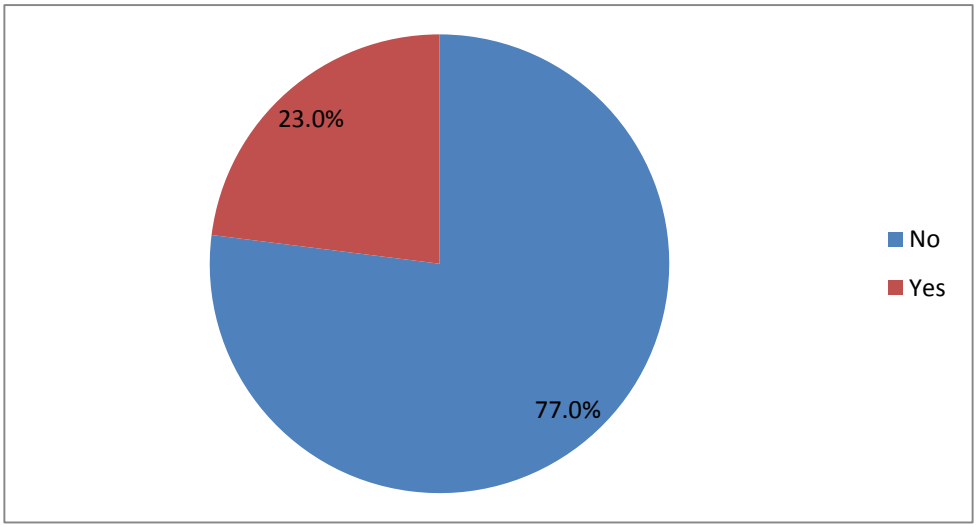

Figure 4.10: Annual cervical cancer screening by participants (n=123)

Regarding turnaround time, most participants got their results after a long time. Of those who did PAP smear 29.0% of them did not receive results at all and equal number 29% received results at 8 months.

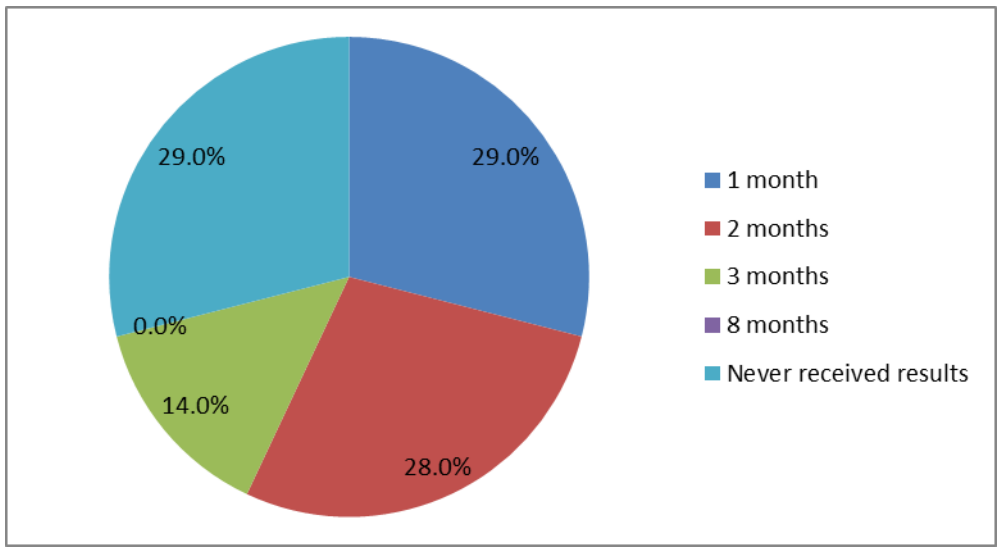

Figure 4.11: Pap smear turnaround time for results (n=123)

4.5.2 Cervical cancer screening tests

Figure 4.11 shows that 12% of those who screened for cervical cancer were done VIA.

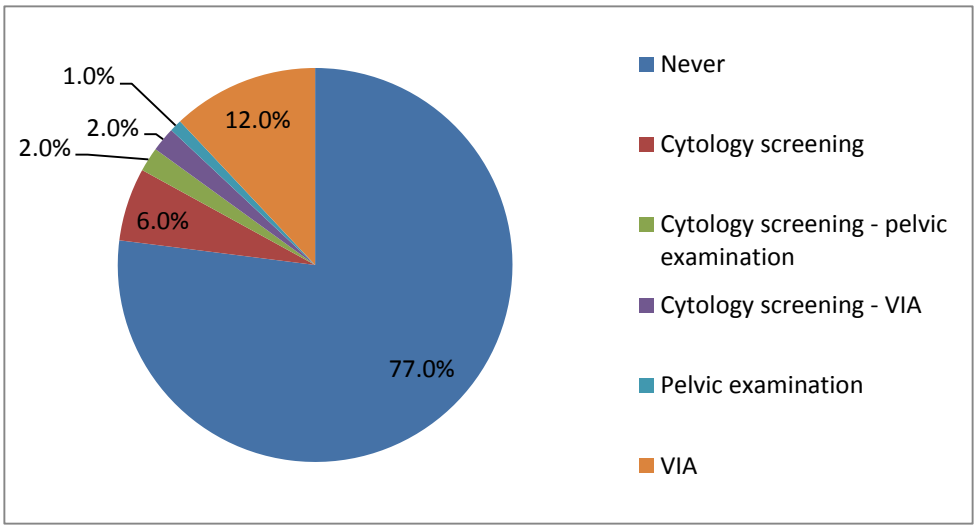

Figure 4.12: Cervical cancer screening tests used by the women (n=123)

4.5.3 Health education in the ART clinic on cervical cancer screening

(p=0.018

4.5. 4 Health education in ART clinic (n=123)

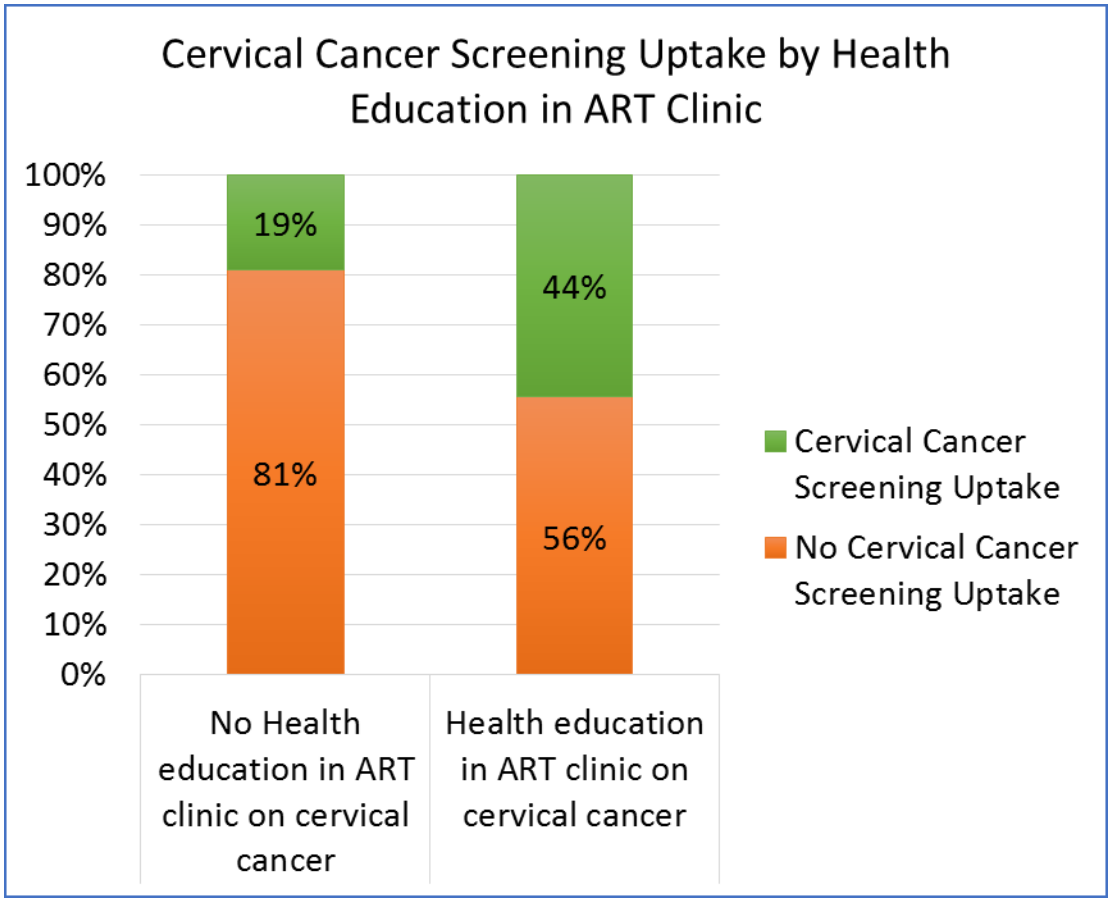

Figure 4.13: Health education in ART clinic (n=123)

Of the clients who received no health education at the ART clinic, only 19% received cervical cancer screening and from those participants who received health education at the ART clinic 44% did screen for cervical cancer.

4.5.5 IEC material at ART clinic

The researcher wanted to know whether participants were able to get IEC material on cervical cancer screening, only 122 (1%) received IEC material.

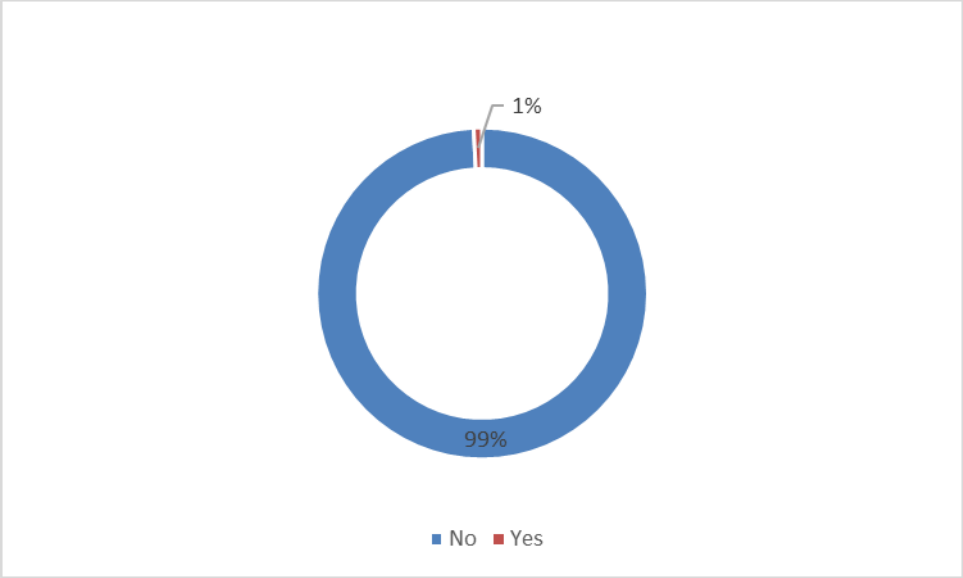

Figure 4.14: Availability of IEC material in ART clinics (n=123)

4.5. 6 Availability/accessibility of cervical cancer screening at the ART clinic

The researcher wanted to know whether cervical cancer screening was accessible /available at the ART clinic. Only 4% of the respondents reported availability.

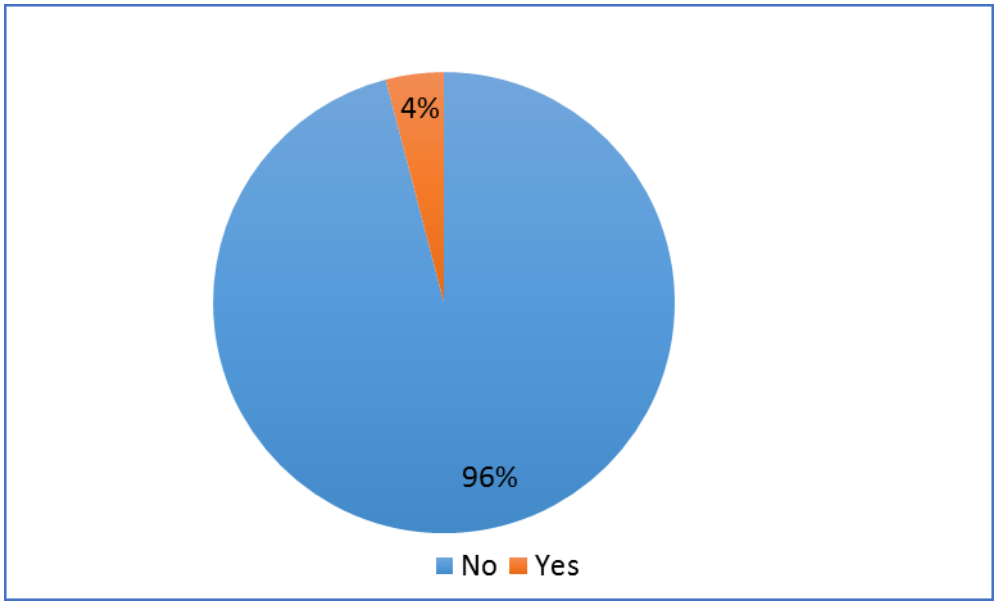

Figure 4.15: Cervical cancer screening availability at ART Clinic by participants (n=123)

4.5.7 Planned cervical cancer screening programme in the ART clinic

In this current study, the researcher wanted to assess whether cervical cancer screening is fully integrated in the ART clinic. Only 1 of the participants reported that services were well planned.

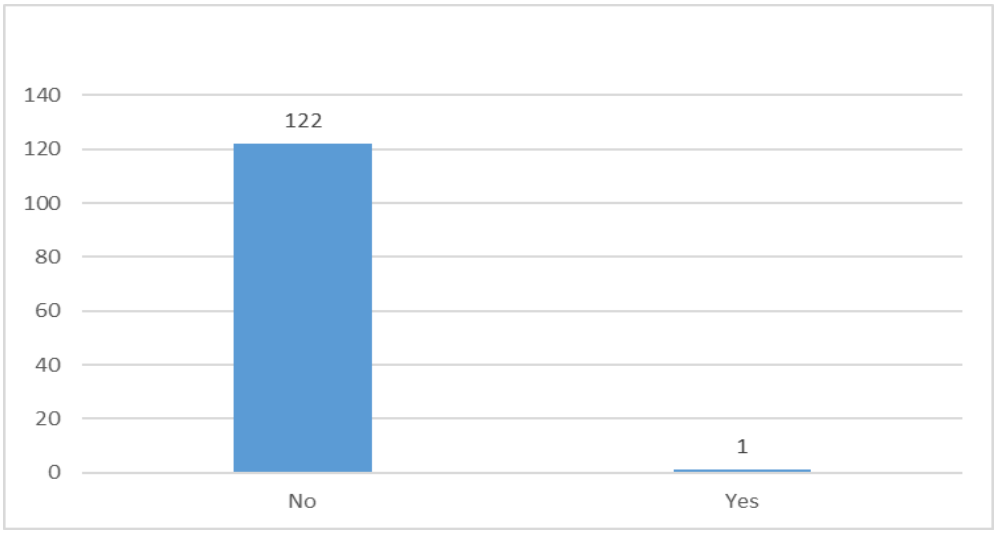

Figure 4.16: Well-planned cervical cancer programme in the ART unit (n=123)

4.6 AWARENESS (KNOWLEDGE) ON CERVICAL CANCER

4.6.1 Human Papilloma Virus (HPV) as a cause for cervical cancer

Knowledge of HPV as a cause for cervical cancer.

According to figure 4.16 only 3 (2.5%) knew that HPV causes cervical cancer. Majority did not know that it causes cervical cancer.

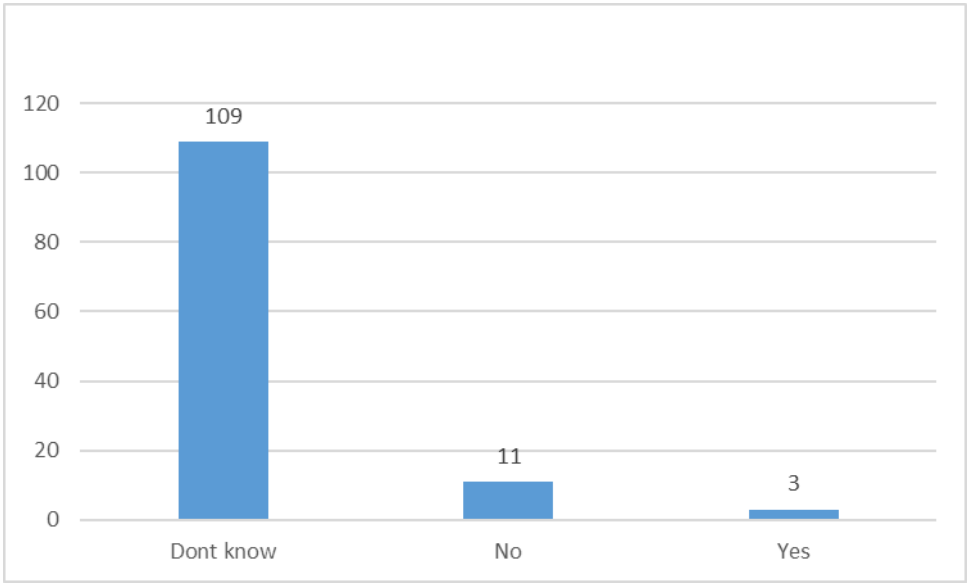

Figure 4.17 Knowledge on human papilloma virus (n=123)

4.6. 2 Risk factors for cervical cancer

Regarding cervical cancer risk factors, 75% of participants knew the risk factors for cervical cancer. Only 25% did not know the risk factors.

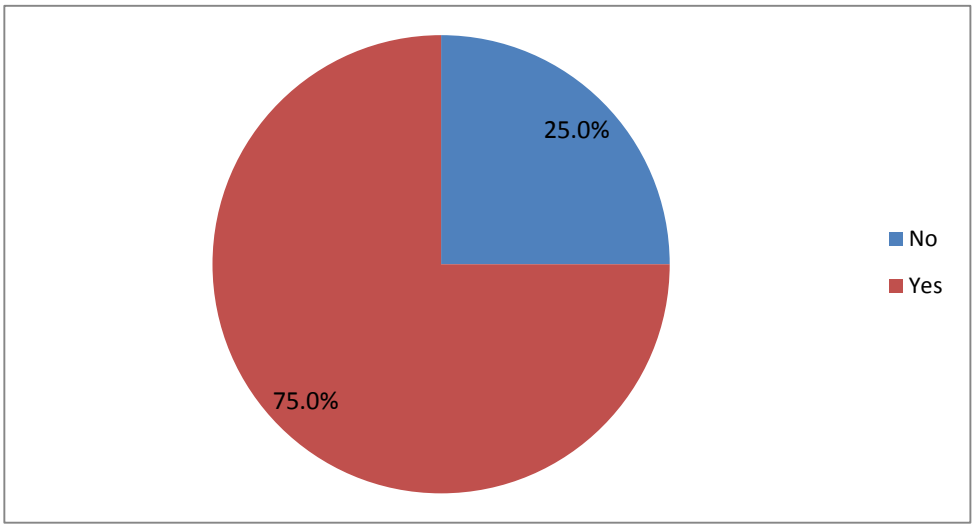

Figure 4.18: Knowledge on cervical cancer risk factors by participants (n=123)

4.6.3 Cervical cancer screening frequency for HIV positive women

The researcher wanted to know whether participants know how often an HIV positive woman should screen for HIV. The results showed that 10% said that it should be done at 6 months' interval, 34% said once annually and 56% did not know at all.

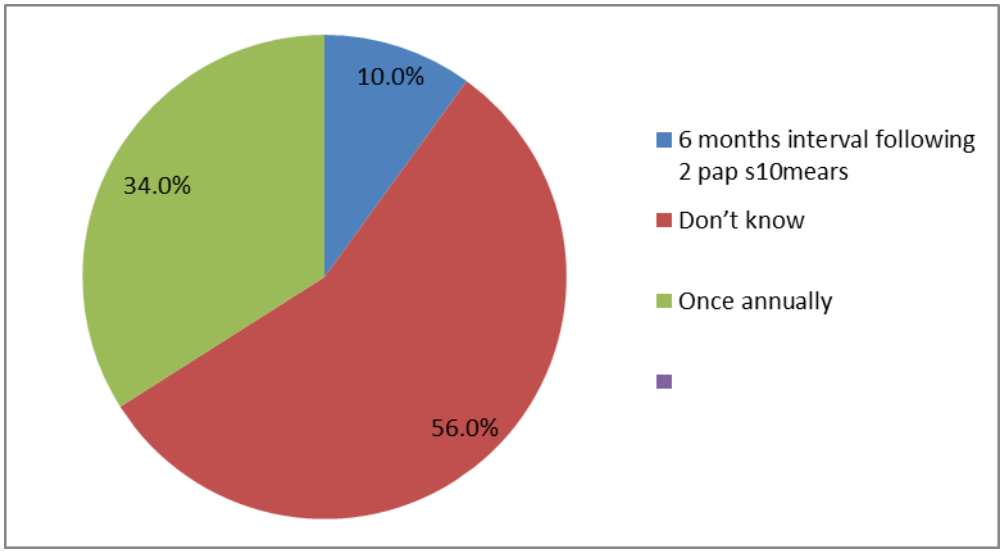

Figure 4.19: Cervical cancer screening frequency by participants (n=113)

4.6.4 Risk perception to cervical cancer

Of the women who participated in the study, 86% of those who were employed full time perceived cervical cancer to be a risk factor for HIV positive women**.** About 62% of the participants perceived themselves to be at risk of cervical cancer by virtue of being HIV positive.

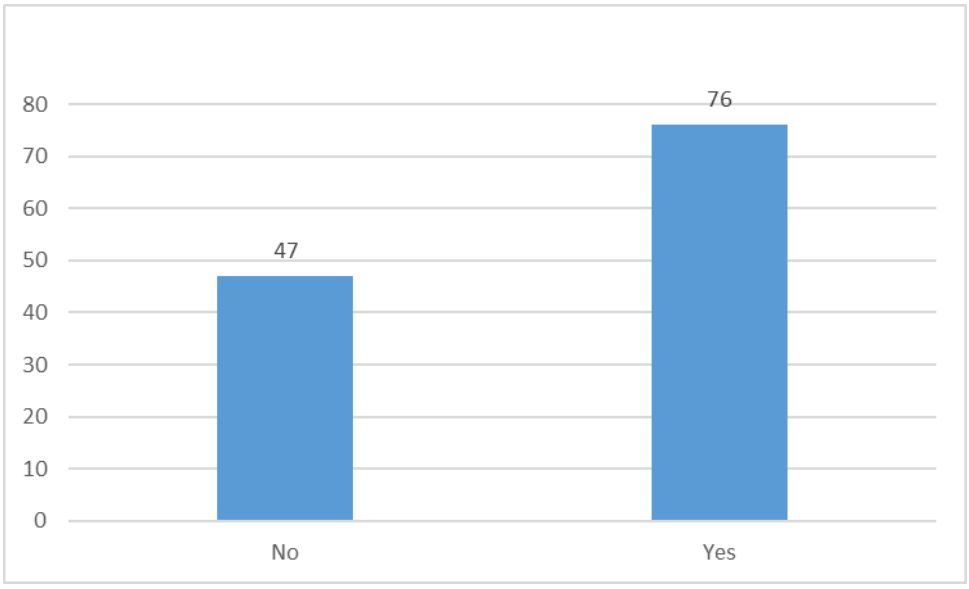

Figure 4.21 Perception of risk factors by women (n=123)

4.6.5 Perception of cervical cancer as a serious condition for HIV positive women

With regards to cervical cancer as a serious condition for HIV positive women, 85 (69%) of the women perceived cervical cancer to be a serious condition for HIV positive women. Only 31% did not perceive it to be a serious condition.

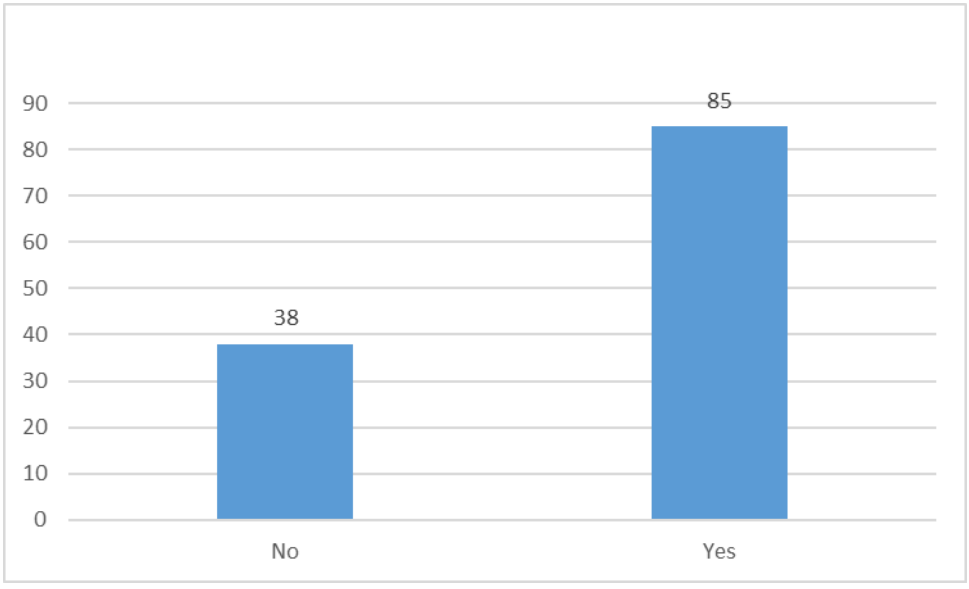

Figure 4.22: Cervical cancer perception as a serious condition (n=123)

4.9.3 Main source of cervical cancer information

The researcher wanted to assess how participants got general information on cervical cancer screening programmes.

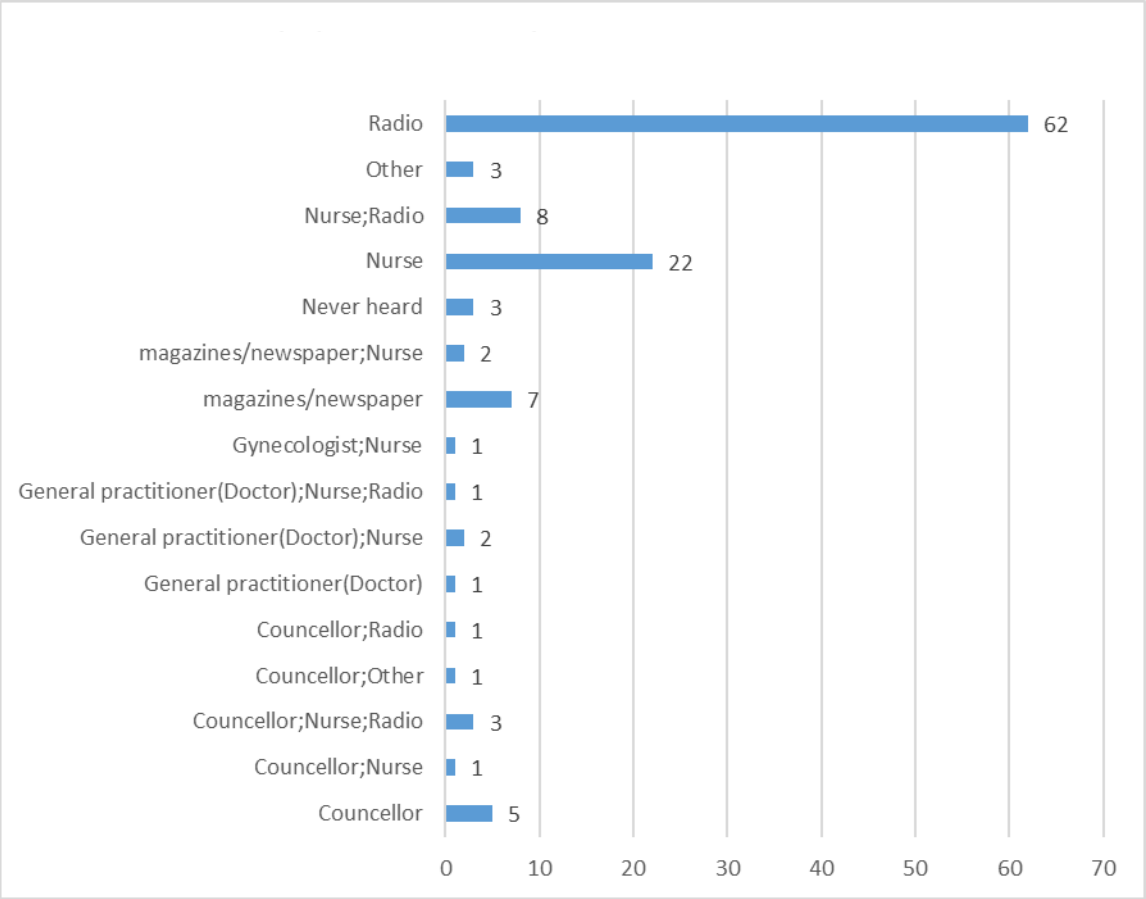

Figure 4.21: Main source of cervical cancer information (n=123)

Figure 4.21 shows that most of the participants got information from the radio (62/50%). Only 22 %(185) received information from nurses.

4.9.4 SUMMARY

This chapter presented and discussed the data analysis and the findings according to each variable from the questionnaire. The socio-economic demographic factors associated with accessing cervical cancer screening services by women in Swaziland have been described.

Factors affecting the uptake of cervical screening for cancer of women in Swaziland were described and finally the level of awareness was discussed. The results have shown that health facilities are not yet providing quality services to ensure that women

are screened on cervical cancer. Fewer women are knowledgeable about cervical cancer as a condition and its risk factors. Chapter 5 will discuss the conclusions, limitations and recommendations of this study.

CHAPTER 5

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

Chapter 4 presented the results of this study. In this chapter, findings and recommendations will be suggested. Since the study has three objectives, the discussion will be in three sections that are per objective. The objectives are socio-economic demographic factors associated with accessing cervical cancer screening services by women, factors affecting cervical cancer screening and assessment of knowledge of cervical cancer and awareness of screening regimes and routines among HIV positive women.

5.2 SECTION A: SOCIO-DEMOGRAPHIC PARAMETERS

This section summarizes the findings from Chapter 4 according to the socio-demographic characteristics, namely; age, level of education, employment status, marital status and area of residence. Conclusions and recommendations will be set forth based on the findings.

The study sample was N=123 women from the age 18 upwards. This sample was statistically calculated. So, it is enough for the study. The respondents were HIV positive women who were either on ART or PREART. As described in the Swaziland Cervical Cancer Guidelines (2013:6). The sample consisted of women aged 18 and upwards. This is because of one of the cervical cancer risk factors (exposure to sexual activity <20 years of age).

5.2.1 Age

The sample comprised mainly of women aged 25-34. These are the middle-aged women. This age group was relevant because this is the group that is usually affected by cervical cancer (Swaziland cervical cancer Guidelines: 21)

The study findings show that only 38% of the respondents aged 15-24 had a higher uptake of cervical cancer screening. This means that younger women find it necessary to screen for cervical cancer compared to older women.

Conclusion

It can be concluded that among the age groups, younger women are likely to access cervical cancer screening services than older women and this can be due to assertiveness of younger women.

Recommendation

- The health care workers need to sensitize all women about cervical cancer screening as part of routine care at all levels. All other age groups also need information on cervical cancer screening.
- Health care workers need to be proactive when dealing with HIV positive in the younger age group.

5.2.2 Marital status

In this study, marriage did not have an influence on cervical cancer screening. Although there were more of the married women who were tested for cervical cancer, the difference was too small.

Conclusion

This means that married women are also not aware that marriage can contribute to the incidence of cervical cancer, due to the fact that the papilloma virus can also be transmitted sexually leading to women being vulnerable to get cervical cancer**.**

Recommendation

It is known for a fact that male involvement in health care delivery is very important for improvement of family health seeking behaviour. Men should also be educated on cervical cancer prevention.

5.2.3 Educational status

Most participants had some form of education; only 18 participants did not have education at all. Of the respondents n=47 had secondary education and n= 32 had high school education**.**

Conclusion

Generally uneducated women tend to pay fewer visits to hospital, but in this case these women were all in care and they visit the facility on appointment, this unveils the fact that cervical cancer screening is not yet fully implemented by the health care workers.

Recommendations

The Swaziland national AIDS program should make cervical cancer screening a standard of care for all HIV positive women and improve the health education to inform the communities at grass roots level**.**

5.2.4 Area of residence

Most women who participated in the study were from the rural areas (75.6) % whilst 10.6% resided in the urban area.

The women who utilised the services of cervical cancer screening were mostly from urban areas (46.2%).

Conclusion

Screening and early treatment for cervical cancer is feasible and it can be integrated into HIV care where reproductive health services are also in place. This can produce a high yield because the HIV positive women occasionally visit the clinic for follow up.

Recommendation

A one stop service at the ART clinic would allow women whether from the rural setting or urban to get an opportunity to be screened for cervical cancer**.**

5.2.5 Employment status

A bigger proportion of the participants were not employed. This could not prevent the women from accessing cervical cancer screening because it is free. However, this could affect women who live in the rural areas, since the service is not provided in primary health clinics. The rate of employment was very low, n=74 were unemployed. Only 28 were employed full time and n=18 were employed part time. This could be due to the fact that the data were collected during working days.

Conclusion

The high unemployment rate is quite bad and it reflects that as a country we are not doing well in the SDGs, especially number 8. of achieving permanent and decent work for all including women. This is a barrier in health care services access, especially cervical cancer because women need transport fees to go to the health facilities.

Recommendations

The Swaziland MOH, should decentralize cervical cancer screening services to the rural clinics, so that women can access them and clients waiting time reduced, since the clients are sometimes in a hurry to catch transport back home.

Rural health motivators need to be trained on cervical cancer so that they can give information in the communities. Community dialogues can also be done as a strategy for sensitizing and demand creation.

5.2.6 Income

The study findings revealed that the most of the respondents were employed full time, few were not employed. The mean amount received per month was 1400 for participants who reached university. Those who were employed full time received 2646.

Conclusion

Basically, the participants were able to attend to hospital and whether they screen for cervical cancer or not was not related to money because, services are free.

Recommendation

Respondents who do not have a source of income must be referred to the community for income generating projects.

5.2.7 Religion

The study findings showed that majority of the respondents were Christian's p=120, fewer were not Christians. Some religious practices influence health seeking behaviour. In this study respondents were not affected by religion in order to screen.

Conclusion

Since majority of respondents were Christians, nothing much needs to be adjusted.

Recommendation

Health care workers need to be proactive and pick early any unfavourable religious beliefs.

5.2.8 Sexual debut

Swaziland has the highest HIV prevalence in the world and the risk of cervical cancer is also high because women have early sexual debut as indicated in this study. In this study, 80% of the participants had their sexual debut before 20 years.

Conclusion

This is a revelation that women start their sexual activity very early. This is a cause for concern; early sexual debut exposes women to early HIV and HPV infection. So, vaccination of girls early in life is very important in primary prevention. This is so because the vaccines do not treat pre-existing HPV.

Recommendation

The Swaziland Ministry of Health needs to focus in prevention programmes. The HPV vaccine needs to be introduced at early ages of girls. This can be incorporated in the clinics and the school health programme.

5.3 SECTION B: FACTORS AFFECTING CERVICAL CANCER SCREENING

5.3.1 Annual Pap smear and turnaround time for results

In this study only 23%of the respondents were found to have screened for cervical cancer using PAP smear. The turnaround time for results is very critical in that it helps the clinicians to act promptly. In this study 29% of the results never came back to the facility, those that came back came in the interval of 1-3 months.

The main barriers of cervical cancer screening in developing countries are lack of awareness of cervical cancer screening. Women are not willing to screen for cervical cancer and lack of political commitment leads to poor cervical cancer screening by women (Moodley 2009:11).

Conclusion

Screening clients and not giving them the results is bad practice and it leads to client's dissatisfaction to quality service delivery.

Recommendations

Health facilities need to have a system to ensure that clients receive their results. There should be collaborative quality improvement projects implemented with specific indicators.

5.3.2 Cervical cancer screening tests done

Out of the 23% of respondents who did a cervical cancer screening test, 12% did VIA, 6% cytology and 3% pelvic examination. This is a low percentage considering the fact that the women are all HIV positive.

Conclusion

This is a very low % that screened for cervical cancer. V IA is cheaper and easy to do; it is very unfortunate that only 12% was tested using that method.

Recommendation

The MOH SRHU department need to assess and accredit health facilities to do cervical cancer screening using simpler methods like the VIA.

5.3.3 Health education in the ART clinic on cervical cancer screening

With regards to health education in the ART unit, of those who did not receive health education, 19% screened for cervical cancer and of the 56% who received health education, 44% were screened for cervical cancer.

Conclusion

Information links to positive behaviour

Recommendation

Health education on cervical cancer screening services scale up needs to be strengthened. Cervical cancer screening services needs to be improved in order to reduce morbidity and mortality due to cervical cancer. Health care providers should be trained on cervical cancer screening so that they can educate clients**.**

5.3.4 IEC material on cervical cancer at the ART clinic

All respondents reported that there was no IEC material at the clinic except for Only 1(0.8%) respondent who claimed to have received IEC material at the clinic.

Conclusion

IEC material on cervical cancer is very critical, because women who can read can get information whilst they are waiting to be seen, they can also further read when they are at home and this complements what the health care worker said during an education session**.**

Recommendation

Develop various Information, Education and Communication (IEC) materials regarding cervical cancer.

5.3.5 Availability/Access to cervical cancer screening at the ART clinic

Only 4% of the respondents reported that a health care worker offered to screen them for cervical cancer. This is an act of omission of a service to a woman who is eligible.

Conclusion

Offering cervical cancer screening to a woman is important in order to reduce morbidity and mortality to the women. It enables the health care workers to identify high risk groups and individuals that need special monitoring and care.

Recommendations

- Comprehensive health education to HIV positive women is needed, emphasizing early screening and treatment.

- Male involvement should be promoted because it will assist families in taking informed decisions.

5.3.6 Planned cervical cancer screening program at the ART clinic

With regards to whether cervical cancer screening program was well planned at the ART clinic or not, 99.8% respondents stated that cervical cancer was not well planned. This is what they had to say “It is done in another department, it’s strenuous for me to go and que there” It is done in another unit”. “It’s not convenient for me to visit another department.”

Conclusion

Service integration is very critical for every client; it reduces clients waiting time, promotes privacy and ensures that there are no missed opportunities.

Recommendation

Cervical cancer screening should be integrated within all ART clinics.

5.4 SECTION C: AWARENESS (KNOWLEDEGE) ON CERVICAL CANCER

5.4.1 Is human papilloma virus known to be a cause for cervical cancer?

89% of the respondents reported not to even know what HPV is, 2.4 % reported that yes HPV causes cervical cancer and 8.9% reported that HPV does not cause cervical cancer**.**

Conclusion

There is need to empower women to understand their health care needs and basic screening procedures so as to increase uptake of this health service.

Recommendation

Health education on cervical cancer has to be packed in such a way that women know what HPV is and how it contributes to cervical cancer**.**

5.4.2 Cervical cancer risk factors

Respondents were asked to name risk factors for cervical cancer ranging from HIV infection, multiple sexual partners, low cd4 and use of hormonal contraceptives. A bigger percentage (75%) perceived themselves to be at risk of getting cervical cancer due to the fact that they are HIV positive. While a very low percentage (25%) felt that they were not at risk of getting cervical cancer regardless of their positive HIV status. Some women believe that anyone can get cervical cancer; they believed that a woman should seek medical help once signs and symptoms appear. According to Moodley (2009:12), women in developing countries usually come to a facility when there are already signs and symptoms and that is when the disease is at an advanced stage.

The cervical cancer screening rate is lower than the risk of getting it. The Swaziland National Cervical Cancer Guidelines (2013:33) stipulates that HIV positive women are more at risk of cervical cancer. Literature also states that disease progression of pre-cancer lesions to invasive cancer is very fast (Health Systems Trust 2009:18).

Conclusion

Despite knowledge of being at risk to have cervical cancer, women are not screening for cervical cancer**.**

Recommendation

HIV positive women should be screened biannually on cervical cancer, appointment maybe combined with other services like viral load**.**

5.4.3 Cervical cancer screening frequency

In this study only 10% of the respondents reported that it is done in 6 months' intervals, 56% had no idea about the subject and 34% reported that it is done annually HIV positive women should be screened for cervical cancer twice a year (Swaziland cervical cancer guidelines, 201321).

Conclusion

This is a course for concern; women do not know the frequency of screening for cervical cancer. Lack of knowledge is the factor behind this. This manifest ignorance from the health care workers.

Recommendation

Health care workers need to be trained comprehensively on cervical cancer. Guidelines should be distributed in the health facilities.

5.4.4 Perception of cervical cancer as a serious condition for HIV positive women

Respondents in this study were asked whether they perceived cervical cancer to be a serious condition to HIV positive women and they were asked why? . N=85 responded yes they perceived cervical cancer to be a serious condition and their reasons were that the lowered immunity contributed in one getting cervical cancer. Only n=38 responded No.

Conclusion

Women need to know the relationship between HIV and cervical cancer, so that they take informed decisions**.**

Recommendation

At enrolment for HIV care, women should be screened for HIV, health care workers need to ensure that they comprehend; this should be a standard of care.

5.4.5. Main source for cervical cancer information

In this study it was encouraging to note that N=62 (50%) of the respondents got information about cervical cancer from the radio. However, it was discouraging to learn that only n=22(18%) got information on nurses. One would expect that these women would get information from nurses due to the fact that they are on chronic care. Lack of recommendations from health care workers contributes to low screening uptake**.**

Conclusion

Without proper information on cervical cancer, women are not able to be assertive in initiating cervical cancer screening for them. Some women thought that the cervix is the bladder.

Recommendation

There is a need to scale up cervical cancer screening in order to reduce the incidence and mortality of cervical cancer**.**

5.5 LIMITATIONS OF THE STUDY

Despite the fact that this study has produced significant findings, some limitations are outlined below:

- This study was performed in one hospital; so, the results may not be generalized for the general population and other countries.

5.6 RECOMMENDATIONS REGARDING FURTHER STUDIES

- Data collection should be done in several health facilities in the region to yield more relevant data.
- Qualitative research should be conducted to get in-depth information.
- Studies targeting health care workers about cervical cancer screening should be conducted as they play a major role in promoting health services.

5.7 FINAL CONCLUDING REMARKS

Cancer of the cervix is preventable. Cervical cancer screening and early treatment is vital in every country. This study showed a low level of awareness which resulted in poor uptake. To reduce the incidence of cervical cancer these should be addressed. The general population need to know about cervical cancer, service providers should make it a routine to screen patients especially those who are already on chronic care like HIV, these clients miss opportunities. Cytology has a high sensitivity as a screening test but VIA is cheaper and it has proven to have similar sensitivity but lower specificity and positive predictive value when evaluated in clinical research settings (Deodhar et al., 2012).

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ANNEXURES

ANNEXURE 1: Ministry of Health: Ethical clearance letter

Telegrams:
Telex:
Telephone: (+268 404 2431)
Fax: (+268 404 2092

MINISTRY OF HEALTH
P.O. BOX 5
MBABANE
SWAZILAND

THE KINGDOM OF SWAZILAND

April 16th, 2015

Miss Thembisile Chili
Principal Investigator
MBABANE

REF: MH/599C/ FWA 000 15267/ IRB 000 9688

Dear Miss Chili,

RE: KNOWLEDGE OF CERVICAL CANCER AND AWARENESS OF SCREANING REGIMENS OR ROUTINES AMONG HIV POSITIVE WOMEN IN SWAZILAND

The committee thanks you for your submission to the Swaziland Scientific and Ethics Committee and it has the following comments;

1) Inclusion and exclusion criteria
2) Sample size calculation
3) Number and skills of field workers
4) Include the SiSwati version
5) The issue of the database has to be clear- note that she works with partners
6) A confirmation letter from the University

Yours Sincerely,

MINISTRY OF HEALTH Swaziland Scientific and Ethics Committee (SEC) 23 APR 2015 P.O. Box 5 Mbabane H100 SWAZILAND

RUDOLPH T.D. MAZIYA
THE CHAIRMAN, SEC

cc: SEC members

ANNEXURE 2: Department of Health Studies, Unisa: Ethical clearance certificate

UNISA university of south africa

UNIVERSITY OF SOUTH AFRICA
Health Studies Higher Degrees Committee
College of Human Sciences
ETHICAL CLEARANCE CERTIFICATE

REC-012714-039

HSHDC/393/2015

Date:	26 February 2015	Student No:	4843-837-5
Project Title:	Knowledge of cervical cancer and awareness of screening regimens/routines among HIV positive women in Swaziland.		
Researcher:	Thembisile Chili		
Degree:	Masters in Public Health	Code:	DLMPH95
Supervisor:	Prof LM Modiba		
Qualification:	D Cur		
Joint Supervisor:	-		

DECISION OF COMMITTEE

Approved [√] **Conditionally Approved** [ ]

Prof L Roets
CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE

UNIVERSITEIT VAN SUID-AFRIKA PRETORIA UNIVERSITY OF SOUTH AFRICA

Prof MM Moleki
ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES

ANNEXURE 3: Hhohho Regional Health Office: Letter of permission to conduct the study

Telegrams:
Telex:
Telephone: (+268 404 2431)
Fax: (+268 404 2092

MINISTRY OF HEALTH
P.O. BOX 5
MBABANE
SWAZILAND

THE KINGDOM OF SWAZILAND

P.O. Box 1459
Mbabane
Swaziland

24th March 2015

Dear Ms Thembisile Chili

Re: Request to conduct research at Piggs Peak Hospital (ART clinic in Hhohho region.

Thank you for the request you made to conduct your Masters research entitled "Knowledge of cervical cancer and awareness of screening regimes/routines among HIV positive women in Swaziland'.

I would like to inform you that you are granted the permission to conduct your thesis at Piggs Peak hospital. Kindly share your research findings with the Hhohho RHMT when you research is completed.

Sincerely,

REGIONAL HEALTH ADMINISTRATOR P.O. BOX 5 MBABANE H100 07 APR 2015 SWAZILAND HHOHHO

MKHOSI KHUMALO
HHOHHO REGIONAL HEALTH ADMINISTRATOR

ANNEXURE 4: Questionnaire

My name is Thembisile Chili I am doing a Master's Degree in Public Health the Department of Health studies at the University of South Africa. I am doing a research on Knowledge of cervical cancer and awareness of screening regimens/routines among HIV positive women in Swaziland. I therefore request your participation through an interview guide in this research study. The interview will take between twenty to thirty minutes. The information gathered will be private and confidential that is, it will be used for academic purposes only.

Questionnaire

Instructions: tick in the box for what is relevant

Section A: Demographic Questionnaire

1. Age in years…….

2. Race.

   a) Black ☐

   b) White ☐

   c) Indian ☐

   d) Chinese ☐

   e) Other; specify……

3. Marital status.

   a) Married ☐

   b) Single ☐

   c) Divorced ☐

   d) Widow ☐

   e) Separated ☐

   f) Cohabiting

4. Level of education.

a) Did not attend ☐

b) Primary ☐

c) Secondary ☐

d) High school ☐

e) University /college ☐

5. Area of Residence.

a) Rural ☐

b) Peri-urban ☐

c) Urban ☐

6. Employment status

a) Unemployed ☐

b) Part time ☐

c) Full time ☐

d) Other ☐

specify……

7. Income per month in SZL…….

8. Religion.

a) Christian-specify

denomination…….. ☐

b) Moslem ☐

c) Traditional ☐

d) Other, specify……

9. Do you smoke cigarettes?

   a) Yes ☐

   b) No ☐

   c) If Yes:

      i) When did you start smoking……..

      ii) Number of cigarettes per day…….

10. At what age did you start having sexual intercourse?……

11. How many sexual partners do you have?……

12. How many children do you have?……

13. Have you ever been diagnosed as having external genital warts?

   a) Yes ☐

   b) No ☐

14. Have you ever been treated for any Sexually Transmitted Infections?

   a) Yes ☐

   b) No ☐

15. When were you diagnosed HIV Positive…….

Section B: Screening Uptake Questionnaire

16 Do you get an annual pap smear?

   a) Yes. ☐

   b) No. ☐

   c) How long does it take for the results of the screening tests…….

      ……

17. Have you ever undergone any of the following cervical screening tests?

a) Pelvic examination ☐ ☐

b) Cytology screening ☐ ☐

c) Colposcopy ☐ ☐

d) Visual Inspection with Acetic Acid (VIA) ☐ ☐

e) HPV test ☐ ☐

If yes to one or more of the above:

Indicate…… how often?.....

If **No** to any of the above what are the reasons for the failure to receive screening?

a) Do not know about the test. ☐

b) It is not available to me. ☐

c) It is not accessible to me. ☐

d) It is expensive to me. ☐

e) Fear of positive results. ☐

f) Fear of the pain of the procedures. ☐

g) Not comfortable being examined by a male ☐

h) Other reasons, specify…….

……

……

18. Do you get health education in the ART Clinic on cervical cancer screening?

a) Yes ☐

b) No ☐

Comment: ……

19. Do the health care providers in the ART Clinic provide you with a cervical cancer screening IEC material?

a) Yes ☐

b) No ☐

Comment: ……

20. Are the cervical screening services readily available or accessible in the ART clinic?

a) Yes ☐

b) No ☐

Comment: ……

21. Do you consider the cervical cancer screening program in the ART clinic well planned?

a) Yes ☐

b) No ☐

Comment: ……

Section C: Awareness (knowledge) on Cervical Cancer

22. Does Human Papilloma Virus (HPV) causes cervical cancer?

a) Yes ☐

b) No ☐

c) Do not know ☐

☐

23. The following are risk factors for cervical cancer?

a) HIV infection ☐

b) Immunosuppression (CD4+ cell count of less than 200) ☐

c) High number of sexual partners ☐

d) Cigarette smoking ☐

e) Use of hormonal contraceptives ☐

Other:……..

24. How often should an HIV positive woman go for cervical cancer screening?

a) Once annually ☐

b) At 6-month interval following two initial normal Pap smears, then a cytologic examination annually ☐

c) Do not know ☐

25. Do you perceive yourself to be at a higher risk of having cervical cancer because you are HIV positive?

a) Yes ☐

b) No ☐

26. Do you perceive cervical cancer to be a serious condition to HIV positive women?

a) Yes ☐

b) No ☐

c) Explain your answer……

27. How did you know about cervical cancer screening programs?

a) Gynecologist ☐
b) General practitioner (Doctor) ☐
c) Nurse ☐
d) Counselor ☐
e) Radio ☐
f) Magazines/newspapers ☐
g) Never heard ☐
h) Others specify…….

ANNEXURE 5: Letter from the editor

EDITING AND PROOFREADING CERTIFICATE

7542 Galangal Street

Lotus Gardens

Pretoria

0008

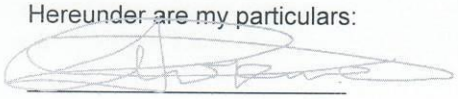
06 September 2016

TO WHOM IT MAY CONCERN

This letter serves to confirm that I have edited and proofread Ms T. Chili's thesis entitled: **"KNOWLEDGE OF CERVICAL CANCER AND AWARENESS OF SCREENING REGIMES/ROUTINES AMONG HIV POSITIVE WOMEN IN SWAZILAND."**

I found the work easy and enjoyable to read. Much of my editing basically dealt with obstructionist technical aspects of language which could have otherwise compromised smooth reading as well as the sense of the information being conveyed. I hope that the work will be found to be of an acceptable standard. I am a member of Professional Editors Group and also a Language Editor at Bureau of Market Research at the University of South Africa.

Hereunder are my particulars:



Jack Chokwe (Mr)

Bureau of Market Research (Unisa)

Contact numbers: 072 214 5489 / 012 429 3327

jmb@executivemail.co.za

Professional EDITORS Guild